Cisco Unified Contact Center Express Report User Guide 10.6(1)

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Change History

Change	See	Date
Added new Finesse Email reports.	Updated Historical Reports, on page 3.	Initial release of document for 10.6(1)

About This Guide

The *Cisco Unified Contact Center Express Report User Guide* describes how to generate Cisco Unified Intelligence Center reports for Cisco Unified Contact Center Express (Unified CCX). This guide also describes how to schedule and visually customize existing stock reports, and create dashboards. In addition, this guide provides answers to a variety of frequently asked questions.

Audience

This document is intended for Unified CCX users who use Cisco Unified Intelligence Center reports to run reports. The user can generate reports, filter data in a report, and schedule a report.

Related Documents

Document or resource	Link
Cisco Unified Contact Center Express Documentation Guide	http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_documentation_roadmaps_list.html
Cisco.com site for Unified CCX documentation	http://www.cisco.com/en/US/products/sw/custcosw/ps1846/tsd_products_support_series_home.html
Online help files for each report	Available when you generate the report
Comparison of Cisco Agent Desktop or Cisco Supervisor Desktop with Finesse desktops	http://www.cisco.com/en/US/partner/products/ps11324/prod_white_papers_list.html
Troubleshooting tips for Unified CCX	http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_CCX_10.5
Cisco.com site for Unified Intelligence Center documentation	http://www.cisco.com/en/US/products/ps9755/tsd_products_support_series_home.html
Cisco.com site for Cisco Finesse documentation	http://www.cisco.com/en/US/products/ps11324/tsd_products_support_series_home.html

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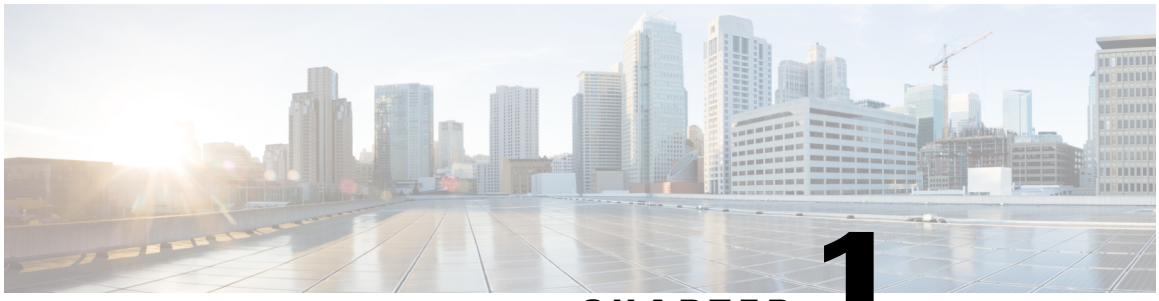


CHAPTER 1

Getting Started

- Overview, page 1
- Common Terms, page 2
- Authorized Users, page 2
- Available Reports, page 3
- Start Unified Intelligence Center, page 8
- Trust Self-Signed Certificate, page 9
- View Help, page 10

Overview

Unified CCX users can access reports using Cisco Unified Intelligence Center and Cisco Finesse. Unified Intelligence Center is a comprehensive, end-to-end reporting solution for Unified CCX. You can access Historical and Live Data reports.

With Unified Intelligence Center, you can complete the following tasks:

- Generate and view reports.
- Filter data in the reports by setting parameters.
- View help for a report.
- Pop out the report in a new browser.
- Create and view dashboards.
- View permalinks for reports and dashboards.
- Configure thresholds for grid data cells.

Common Terms

Data Source

Data source defines the sources that contain data for the report. Unified Intelligence Center supports two types of data sources: IBM Informix and Java Message Service (JMS). Data sources are preconfigured for you.

Note Additional data sources are not supported.

Reports

Reports show data returned by Report Definitions. This data is extracted by database queries.

Stock Report

Report that is pre-bundled in Unified Intelligence Center.

Report Views

A report can be presented in multiple formats like a grid, chart, or a graph. Each view can have its own set of fields. A single report can have multiple views.

Report Help

You can attach a help page specifically for your report.

Authorized Users

The following user groups can access the reports:

- Agents—User can access the Live Data agent reports.
- Supervisors—User can access the Live Data agent and supervisor reports.

  Note To access Unified Intelligence Center Live Data reports, the supervisor should be assigned an agent Unified CCX extension.

- Reporting users—User can access Historical reports and Live Data reports.

Note Live Data reports can only be run by agents, supervisors, and reporting users.

Available Reports

Historical Reports

These reports access past data from the historical data source to display information for the specified period of time. The refresh rate is 30 minutes. Historical reports display 8000 rows at a time.

Live Data Reports

These reports access current data from the Java Message Service (JMS) data source to display information about the current state of the contact center. The refresh rate is 3 seconds.

License-Wise Reports

For information on reports that are available based on the Unified CCX license package, see the "Reporting" section of the *Cisco Unified Contact Center Express Design Guide*, located at:

http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_implementation_design_guides_list.html

Historical Reports

Report Categories	Available Reports
Chat reports	Chat Agent Detail Report
	Chat Agent Summary Report
	Chat CSQ Activity Report
	Chat CSQ Agent Summary Report
	Chat Traffic Analysis Report
Email reports	Email Agent Activity Report
	Email Contact Service Queue Activity Report
	Email Contact Service Queue Agent Activity Report
	Email Inbox Traffic Analysis Report
	Email Resolution Detail Report
	Email Response Detail Report

Report Categories	Available Reports
Finesse Email reports	Email Agent Activity Report
	Email Contact Detail Report
	Email CSQ Activity Report
	Email Traffic Analysis Report

Report Categories	Available Reports
Inbound reports	Abandoned Call Detail Activity Report (For FAQ, see Abandoned Call Detail Activity Report, on page 62.)
	Aborted Rejected Call Detail Report
	Agent Call Summary Report (For FAQ, see Agent Call Summary Report, on page 63.)
	Agent Detail Report (For FAQ, see Agent Detail Report, on page 64.)
	Agent Login Logout Activity Report (For FAQ, see Agent Login Logout Activity Report, on page 64.)
	Agent Not Ready Reason Code Summary Report
	Agent State Detail Report
	Agent State Summary by Agent Report
	Agent State Summary by Interval Report
	Agent Summary Report (For FAQ, see Agent Summary Report, on page 65.)
	Agent Wrap-up Data Summary Report
	Agent Wrap-up Data Detail Report
	Call Custom Variables Report (For FAQ, see Call Custom Variables Report, on page 66.)
	Called Number Summary Activity Report
	Common Skill CSQ Activity report (For FAQ, see Common Skill CSQ Activity Report, on page 66.)
	Contact Service Queue Activity by CSQ Report (For FAQ, see Contact Service Queue Activity by CSQ Report , on page 68.)
	Contact Service Queue Activity Report (For FAQ, see Contact Service Queue Activity Report, on page 67.)
	Contact Service Queue Activity Report by Interval
	Contact Service Queue Call Distribution Summary
	Contact Service Queue Priority Summary
	Contact Service Queue Service Level Priority Summary Report

Report Categories	Available Reports
	CSQ Agent Summary Report
	Detailed Call by Call CCDR Report (For FAQ, see Detailed Call by Call CCDR Report, on page 70.)
	Detailed Call CSQ Agent Report
	Priority Summary Activity Report
	Traffic Analysis Report (For FAQ, see Traffic Analysis Report, on page 71.)
Outbound reports	Agent Outbound Campaign Summary Report
	Agent Outbound CCDR Report
	Agent Outbound Half Hourly Report
	IVR Outbound Campaign Summary Report
	IVR Outbound Half Hourly Report
	IVR Outbound CCDR Report
	Outbound Agent Detail Performance Report
	Preview Outbound Agent Detail Performance Report
	Preview Outbound Campaign Summary Report
System reports	Application Performance Analysis Report (For FAQ, see Application Performance Analysis Report, on page 66.)
	Application Summary Report
	License Utilization Hourly Report (For FAQ, see License Utilization Hourly Report, on page 70.
	Remote Monitoring Detail Report

Live Data Reports

Live Data reports present ACD calls, chat and outbound reports, and do not contain email reports. You can access Live Data reports using Unified Intelligence Center or Cisco Finesse.

Live Data Reports on Unified Intelligence Center

The following table lists the available Live Data reports:

Report Categories	Available Reports
Agent	Agent CSQ Statistics Report
	Agent State Log Report
	Agent Statistics Report
	Agent Team Summary Report
Supervisor	Agent Outbound Team Summary Report
	Chat Agent Statistics Report
	Chat CSQ Summary Report
	Team State Report
	Team Summary Report
	Voice CSQ Agent Detail Report
	Voice CSQ Summary Report

Live Data Reports on Finesse

Agent and supervisors can access Live Data reports that are configured to be displayed in the gadgets of the desktops. The following are the reports that are displayed in the gadgets:

Users	Reports	Report View	Is the Report Available in Default Layout ?	Tab
Agent	Agent CSQ Statistics Report	Agent CSQ Statistics Report	Yes	Home
Agent	Agent State Log Report	Agent State Log Report	Yes	My Statistics
Agent	Agent Statistics Report	Agent Statistics Report	Yes	My Statistics
Agent	Agent Team Summary Report	Agent Team Summary Report	Yes	Home
Supervisor	Agent Outbound Team Summary Report	Report since midnight	No	Team Data

Users	Reports	Report View	Is the Report Available in Default Layout ?	Tab
Supervisor	Agent Outbound Team Summary Report	Short and long term average	No	Team Data
Supervisor	Chat Agent Statistics Report	Chat Agent Statistics Report	No	Team Data
Supervisor	Chat CSQ Summary Report	Chat CSQ Summary Report	No	Queue Data
Supervisor	Team State Report	Team State Report	No	—
Supervisor	Team Summary Report	Report since midnight	Yes	Team Data
Supervisor	Team Summary Report	Short and long term average	Yes	Team Data
Supervisor	Voice CSQ Agent Detail Report	Voice CSQ Agent Detail Report	Yes	Queue Data
Supervisor	Voice CSQ Summary	Snapshot	Yes	Queue Data
Supervisor	Voice CSQ Summary	Short and long term average	Yes	Queue Data
Supervisor	Voice CSQ Summary	Report since midnight	No	Queue Data

For Finesse documentation, see:

http://www.cisco.com/en/US/products/ps11324/tsd_products_support_series_home.html

Start Unified Intelligence Center

Access Unified Intelligence Center only after the administrator completes the post installation tasks for Unified CCX.

Procedure

Step 1 Open a web browser.

Step 2 Use one of these methods to access Unified Intelligence Center:

a) Enter the URL `http://<host address>` and click **Cisco Unified Contact Center Express Reporting**.

b) Enter the URL `http://<host address>:8081/cuic`.

c) Enter the URL `https://<host address>:8444/cuic`.

Note Host address is the DNS name or IP address of the Unified CCX node.

Step 3 Enter your username and password.

Step 4 Click **Log In**.

Trust Self-Signed Certificate

When you access a server for the first time, follow the below steps to trust a self-signed certificate.

Procedure

Step 1 Start Unified Intelligence Center.

Step 2 Perform the following steps to trust the self-signed certificate:

Option	Description
If you use Internet Explorer:	**1** A page appears that states there is a problem with the website's security certificate. Click **Continue to this website (not recommended)**. A sign in page opes and a certificate error appears in the address bar of your browser. **2** Click **Certificate Error**, and then click **View Certificates** The **Certificate** dialog box appears. **3** On the **Certificate** dialog box, click **Install Certificate**. The **Certificate Import Wizard** appears. **4** Click **Next**. **5** Select **Place all certificates in the following store**, and then click **Browse**. **6** Select **Trusted Root Certification Authorities**, and then click **OK**. **7** Click **Next**. **8** Click **Finish**. **9** If a Security Warning dialog box appears that asks if you want to install the certificate, click **Yes**. A **Certificate Import** dialog box that states the import was successful appears. **10** Click **OK**. **11** Enter your credentials, and then click **Sign In**.

Option	Description
If you use Firefox:	1 A page appears that states this connection is untrusted. 2 Click **I Understand the Risks**, and then click **Add Exception**. 3 On the **Add Security Exception** dialog box, ensure the **Permanently store this exception** check box is checked. 4 Click **Confirm Security Exception**. The page that states this connection is untrusted automatically closes. 5 Enter your credentials, and then click **Sign In**.

View Help

Two types of help are available for a report in Cisco Unified Intelligence Center.

- Application-specific help: This help content explains how to use Unified Intelligence Center in general.
- Report-specific help: This help content explains how to use the report itself. The help can describe the fields or provide details of the relationship between the fields, or it can explain how to interpret the data in the report. This help is available only if it has been created for the report. To know more about how to attach help to a report, see the *Cisco Unified Intelligence Center Report Customization Guide* available here: http://www.cisco.com/en/US/products/ps9755/products_user_guide_list.html.

Get Help on Cisco Unified Intelligence Center

To get help on Cisco Unified Intelligence Center, go to the tab on which on you need help. In the top right corner, click **Help**. The help content related to the tab displays in a separate browser window.

Access Report Help

Procedure

Step 1 Generate the report that you want.

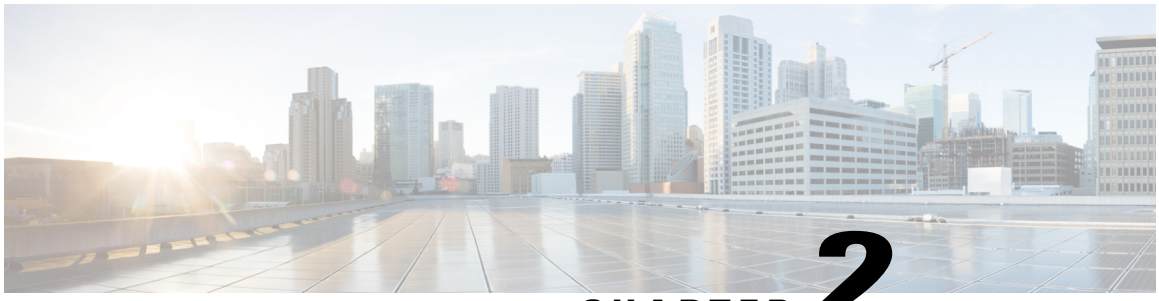
Step 2 On the toolbar, click

and select **Template Help**.

Tip If required, click

until you see the Help icon.

The help window for the report opens.



CHAPTER 2

Manage and Generate Reports

- Report Manager, page 13
- Generate Reports, page 15
- Trust Self-Signed Certificate for Live Data Reports, page 16
- Report Viewer, page 16
- Save an Existing Stock Report, page 19
- Import Reports, page 19
- Export Reports, page 20

Report Manager

Use the Unified Intelligence Center Report Manager to view the location of reports and the hierarchy of the folders where the reports reside. You can do the following:

- Create new folders and subfolders (called categories and subcategories in the user interface) to organize your reports.
- Export an entire folder along with all the reports in it.

Table 1: Report Manager Tasks

Actions	Description
Report level actions	
Run	Runs a report.
Schedule	Directs to the Report Scheduler page so that you can schedule the report to run at a later time or at regular intervals (Create a Schedule for a Report, on page 30).
Edit	Displays the Report Editor.

Actions	Description
Save As	Saves a copy of the report with a different name. **Note** The reporting users do not have permission by default to create a subcategory under the Reports category in Cisco Unified Intelligence Center. Contact your administrator to get permissions. **Note** When you save a report, the report description should not contain the following special characters: parentheses (( )), angle bracket (>), forward slash (/), question mark (?) and any executable scripts such as JavaScript. The text also should not start with a quote (") or quotation mark (').
Edit Views	Displays the available views. You can either create a new view or edit existing views. **Note** You can create or edit views only if you have the write permissions.
Export	Exports a report, including online help and localization files, to your computer. This can be useful when you need to import the report into another Intelligence Center System, for example, from a Lab to a Production system. A Report Designer with write permissions can export a custom report. **Note** If you export a folder, all of the reports in the folder are exported. You cannot export stock reports.
Delete	Deletes a folder or a report. **Note** You cannot delete a stock folder or a stock report.
Subcategory level actions	
Create Sub-category	Creates a subfolder. **Note** Applies to a root level folder as well.
Delete	Deletes a folder or a report. **Note** You cannot delete a stock folder or a stock report.
Rename	Renames a folder or a report. **Note** You cannot rename a stock folder or a stock report. **Note** Applies to a root level folder as well.
Create Report	Creates a new report in the selected folder. Stock reports are reports supported by Cisco. The stock reports can be copied and these copied versions can be edited. **Note** Applies to a root level folder as well.
Permissions	Sets execute and write permissions for the folder.

Actions	Description
Export	Exports a folder or a report to your computer. A Report Designer with write permissions can export a custom report. **Note** If you export a folder, all of the reports in the folder are exported.
Import Report	Imports an existing Unified Intelligence Center report and stores it on this instance of Unified Intelligence Center. **Note** Applies to all folder levels (root, subcategory, and report).
Refresh	Refreshes the Report Manager. **Note** Applies to all folder levels (root, subcategory, and report).

Generate Reports

Procedure

Step 1 In the left pane of the Unified Intelligence Center application, click **Reports**.
Reports open in a separate tab.

Step 2 In the **Reports** tab, access one of these reports as required:

a) For Historical reports, click **Stock** > **Unified CCX Historical**.
b) For Live Data reports, click **Stock** > **Unified CCX Live Data**.

Step 3 Click a report category under **Unified CCX Historical** or **Unified CCX Live Data** as required.

Step 4 Click the report that you want to generate.
The report opens in a separate tab.

Step 5 Set any filters that you want.

Tip
- For Historical reports, see Configure a Date Range Filter, on page 24 and Configure a Value List or Collection Filter, on page 24.
- For Live Data reports, see Configure a Value List or Collection Filter, on page 24 and Configure Advanced Filters, on page 26.

Step 6 Click **Run**.

Tip Scroll up to see **Run**.

Step 7 (Optional) If you are generating Live Data reports for the first time an error message appears after approximately 30 seconds, follow the below steps.

a) Trust the self-signed certificate. See Trust Self-Signed Certificate for Live Data Reports, on page 16.
b) Follow **Steps 1 to 6** to generate the report again.

The report is displayed in the Report Viewer.

Trust Self-Signed Certificate for Live Data Reports

When you generate Live Data reports for the first time, an error message appears after approximately 30 seconds.

Procedure

Perform the following steps to trust the self-signed certificate:

Option	Description
If you use Internet Explorer:	1 When you click **Run** the following message appears: `Internet Explorer blocked this website from displaying content with security certificate errors.` 2 Click **Show content**.
If you use Firefox:	1 When you click **Run** the following message appears: `Cannot connect to the notification service. Click OK to be redirected to a page where you can add a security exception for the certificates issued by the CUIC server, after which the current page will be reloaded. If the condition persists, contact your administrator.` 2 Click **OK**. A page appears that states this connection is untrusted. 3 Click **I Understand the Risks**, and then click **Add Exception**. The **Add Security Exception** dialog box appears. 4 On the **Add Security Exception** dialog box, ensure the **Permanently store this exception** check box is checked. 5 Click **Confirm Security Exception**. The page that states this connection is untrusted automatically closes.

Report Viewer

When you run a report, it is displayed in the Report Viewer. The content varies, based on which view (data presentation) of a report is selected—a grid, a chart, or a gauge. You can change the report view on this page.

There are the two types of Report Viewers: the Historical and Real-time Report Viewer, and the Live Data Report Viewer.

Historical Report Viewer

The Cisco Unified Intelligence Center Historical Report Viewer allows you to do the following:

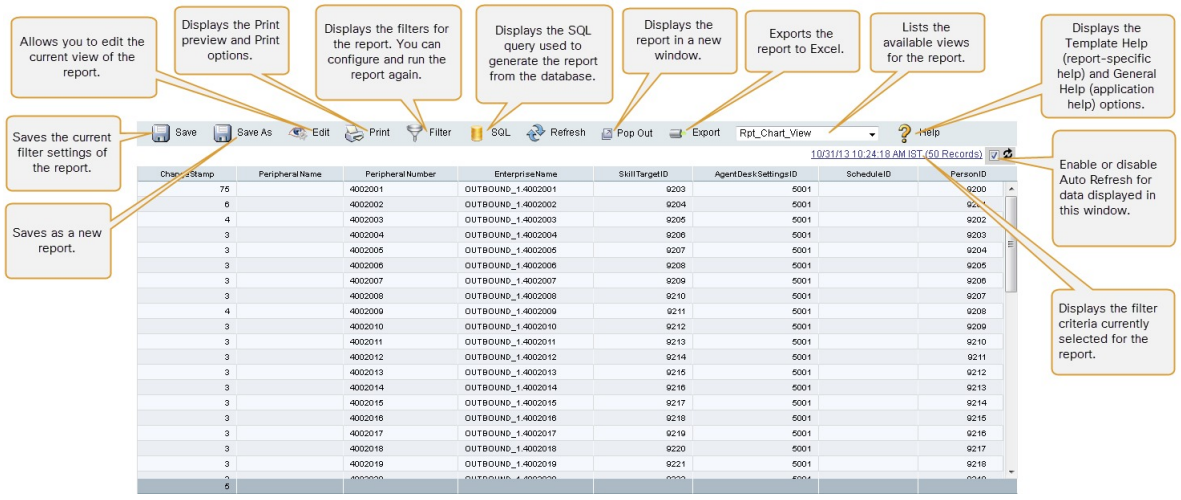
- Filter data in a report
- Change the view of a report from a grid to a graph or a chart

Note You can select only from the views that are currently available for a report.

- Edit the current view
- Refresh a report
- Print a report
- Export a report
- View the SQL query that was used to generate a report
- View help for the report

The following figure shows an example of a Historical report viewer.

Figure 1: Historical Report Viewer


Allows you to edit the current view of the report.
Displays the Print preview and Print options.
Displays the filters for the report. You can configure and run the report again.
Displays the SQL query used to generate the report from the database.
Displays the report in a new window.
Exports the report to Excel.
Lists the available views for the report.
Displays the Template Help (report-specific help) and General Help (application help) options.
Saves the current filter settings of the report.
Saves as a new report.
Save
Save As
Edit
Print
Filter
SQL
Refresh
Pop Out
Export
Rpt_Chart_View
Help
10/31/13 10:24:18 AM IST (50 Records)
Enable or disable Auto Refresh for data displayed in this window.
Displays the filter criteria currently selected for the report.
390067

Live Data Report Viewer

Live Data reports are based on an asynchronous event stream from a Live Data data source and are updated in real-time.

The Unified Intelligence Center Live Data Report Viewer allows you to do the following:

- You can view multiple grid views of the same report. Also, you can resize the column size.

Note Live Data reports supports only the grid view.

- Edit the current view
- **Auto-Refresh—**When Auto-refresh check box is checked, the system updates the data in the report as and when there are updates available. If this check box is unchecked, you see the "New Updates Available" alert message when new data is available in the report. By default, this check box is checked for every report.
- **Show Thresholds Only—**When Show Thresholds Only check box is checked, only rows with matching threshold values are displayed in the report. By default, this check box is unchecked for every report.
- **Pop Out—**Opens the report in a new browser. The pop-out will display the Auto refresh and Show Thresholds Only options.

Note The default settings are retained for the Auto refresh and Show Thresholds Only options.

- You can add or remove columns to the grid view using the gear icon.

Figure 2: Live Data Report Viewer

Allows you to edit the current view of the report.
Enable or disable Auto Refresh for data displayed in this window.
Allows you to hide or display the non-threshold values.
Allows you to edit the filter for the report.
Displays the report in a new window.
Displays the Template Help (report-specific help) and General Help (application help) options.
Name of the report.
Lists the available views of the report.
Let's you add or remove columns from the selected view.
390340

Note Any changes to system time while the Live Data report is running are not taken into account. If server or client is changed or adjusted, the report needs to be refreshed to accurately display the duration field values.

Live Data Reports that are active across a daylight savings time (DST) change do not display correct values in the duration field. An active report needs to be refreshed across a DST change.

Save an Existing Stock Report

Note Contact administrator to assign permissions to the saved report.

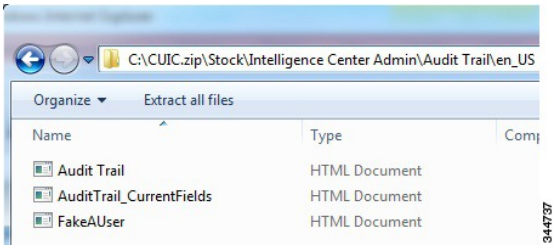
Procedure

Step 1 Right-click the report that you want to save and select **Save As**.
Step 2 In the **Save As** window, enter a name for the report in the **Name** field.
Step 3 Enter a brief description of the report in the **Description** field.
Step 4 Drill down and select a report category in the **Report Category** field.
Step 5 Assign permissions in the **Permissions** section.
Step 6 Click **OK**.
Step 7 You can customize the report as required and click **Save**.

Import Reports

If you have an existing report, you can import that report and the related help files into Unified Intelligence Center. You must zip the report before importing it. The format for storing the report and help content is as shown below:

Figure 3: Directory Structure of the Report ZIP File



Each report help folder has a size limit of 3 MB. If the size exceeds this limit, the system does not load the help content. You can import the following: Report, Report Definition, Value Lists, Views, Report Editor values, Thresholds, Drilldowns, Permissions, and Template Help.

Note However you cannot import the Report Filters and Collections.

To import a report, follow the steps below.

Procedure

Step 1 Click the **Reports** drawer in the left pane.

Step 2 Navigate to the folder where you want to import the report.

Note To create a sub-folder, navigate to the appropriate folder, right-click on the folder, and select **Create Sub-category**.

Note If you are importing a stock report bundle from Cisco.com, it should be placed at the Reports folder level.

Step 3 Click **Import Report**.

Step 4 In the **File Name (XML or ZIP file)** field, click **Browse**.

Step 5 Browse to and select the XML or the compressed report file, and click **Open**.

Step 6 From the **Data source for ReportDefinition** drop-down list, select a data source used by the report definition.

Note This field appears only if the report definition for the report being imported is not currently defined in Unified Intelligence Center.

Step 7 From the **Data Source for ValueList** drop-down list, select the data source used by the value lists defined in the report definition.

Note You have to select a data source for the value list only if it does not use the same data source as the report definition. For report definitions of Real Time Streaming, it is mandatory to select a data source for the Value Lists.

Step 8 In the **Save To** field, browse to the folder where you want to place the imported report. Use the Arrow keys to expand the folders.

Step 9 Click **Import**.

Export Reports

Reports and categories of reports are exported in a zip format and report definitions are exported as a single XML file.

When you export a report, the following are exported:

- Report
- Report Definition
- Value Lists
- Views
- Preferences defined in the Report Editor
- Thresholds
- Permissions
- Online Help (if not bundled, an empty folder is created in the zip file)

The following are not exported with the report:

- Report Filters

- Collections

When you export a Category, the reports in the category are grouped together as zip files. The grouping is done on the basis of the data source used by the report definition as well as the value lists.

Note To export a Category, right-click the category, and click **Export**. Choose to save or open the zip file as required.

Procedure

Step 1 In the left pane, click the **Reports** drawer.

Step 2 Browse to the report that you want to export.

Step 3 Right click the report and select **Export**.

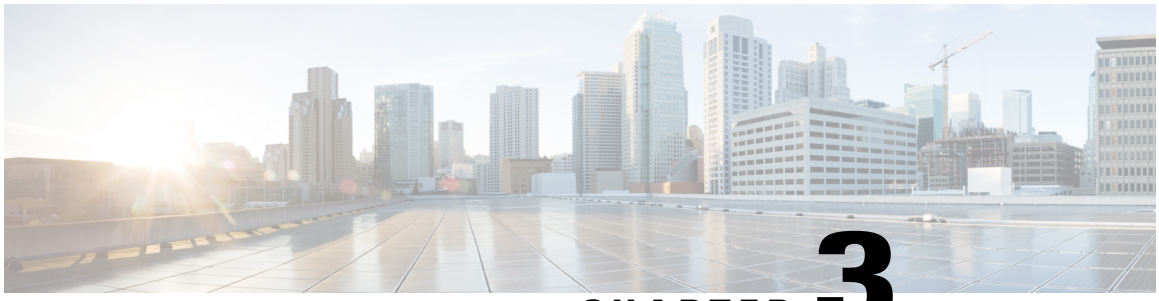
Step 4 Rename the report if required, but do not change the extension.

Step 5 Click **OK**.

Step 6 In the **File Download** window, click **Save** to specify the location where you want to export the report.

Step 7 Browse to the folder where you want to save the report.

Step 8 Click **Save**.



CHAPTER 3

Filter Data in Reports

- Overview, page 23
- Types of Filters, page 23
- Configure a Date Range Filter, page 24
- Configure a Value List or Collection Filter, page 24
- Configure Advanced Filters, page 26

Overview

Report filters in the Unified Intelligence Center are used to present selective data. Use the Filter page to both define and restrict the data that will populate the report.

There are two ways to view the Filter page.

- Before the report is generated—In the **Reports** section, right-click the report and click **Run**. Do this to refine the default filter values before generating the report.
- After the report is generated—In the Report Viewer, click the **Filter** button of the generated report. Do this to refine the filter values for a generated report.

Types of Filters

For Live Data reports, the following filters are available:

- Basic Filters—You can configure the collection and value list filters.
- Advanced Filters—You can filter the data for all the fields that are available in the report based on a predefined criteria.

Attention For Historical reports, Basic Filters and Advanced Filters tabs are not available. The date range, collection and value list filter settings are available in a single window.

Configure a Date Range Filter

Two filters are available for date range:

- Relative date range—You can select from the predefined options.
- Absolute date range—You can set the from and to date and time.

Note If you set the local time zone in the user profile, then the set time zone is considered. If you do not set the local time zone, then the Unified CCX data source time zone is considered.

Attention Date range filters are not available for Live Data reports.

Procedure

Step 1 If you want to set a relative date range:

a) Click **Relative Date Range**.

b) Choose an option from the **Relative Date Range** drop-down list.
Available options—Today, Yesterday, This Week, Last Week, This Month, Last Month, Year to Date, or Last Year.

c) Set the From and To time.

Step 2 If you want to set a absolute date range:

a) Click **Absolute Date Range**.

b) Click the calendar icon and set the **From** and **To** dates.

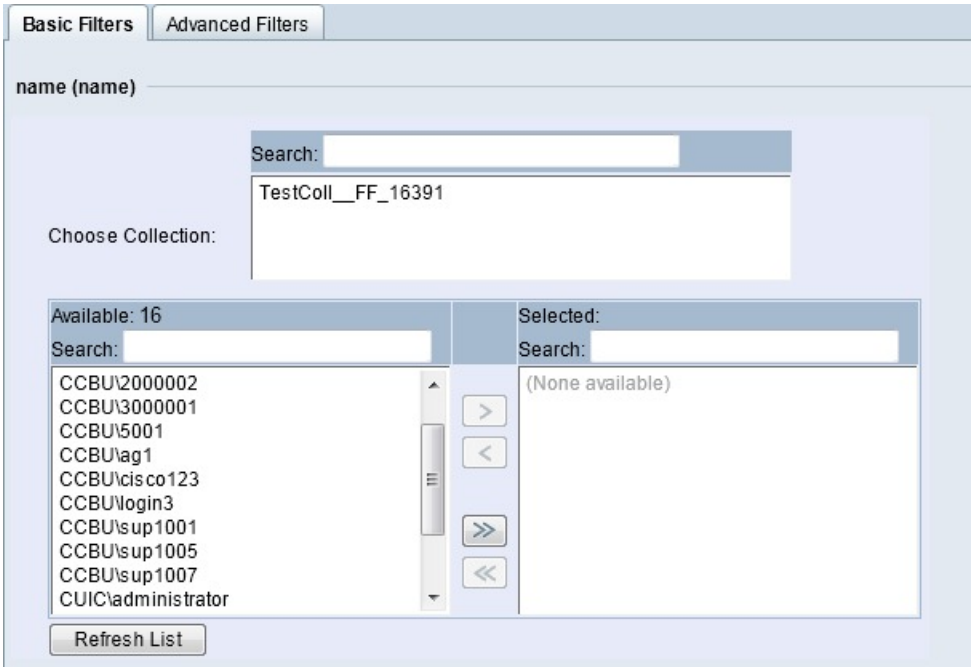
c) Set the **From** and **To** time.

Configure a Value List or Collection Filter

Use the **Basic Filters** tab to configure the date range filter value lists or collections. A collection is a preconfigured group of values.

Note Refresh List is enabled in the **Filter** page only if the user has permissions to the key criteria fields.

Figure 4: Collection Filter



Procedure

Step 1 Click a report to view the **Filter** page.

Step 2 Select the collection or value list from the **Choose Collection** or **Choose Value List** box.

Tip Search for a value or collection using the **Search** box.

Note Do not set multiple filter parameters; set any one filter parameter.

The items in the collection or value list appear in the Available list.

Step 3 Select an item from the Available list and move it to the Selected list.

Step 4 You can repeat the search and add to the list of the selected items. You can also select multiple collections or values.

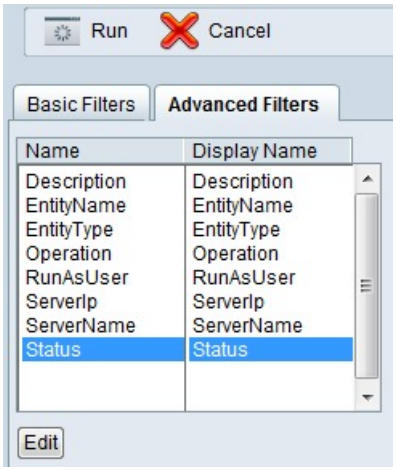
Step 5 Click **Run**.

Configure Advanced Filters

You can use the **Advanced Filters** tab to filter any field in the report. Based on the field type (date, numeric or string), different operators are available. For example, you can filter calls in queue for greater than 2 minutes, or on all agents in the hold state to filter out the less important information.

Note You can perform the same procedure to filter a plain text or a decimal field.

Figure 5: Advanced Filters



Procedure

Step 1 Generate a report and then click **Filter** to view the **Filter** page. To view the Advanced Filters, select the **Advanced Filters** tab.

Step 2 Select a field.

Step 3 Click **Edit** to indicate any value or a filtered value.

Step 4 Select **Filter according to the following criteria**.
Filter criteria depends on the field type (Date, Decimal, Value List, String, or Boolean).

- For **Date**, click **Edit** to specify any value or to filter by selecting either Relative Date Range or Absolute Date Range. For both Relative and Absolute date ranges, you can indicate a specific time period and certain days of the week.
- For **Decimal**, click **Edit** to specify any value or to select an Operator from Equal To, Not Equal To, Less Than, Less Than or Equal To, or Greater Than and then entering a value; for example, Operator = Greater Than and Value = 16.5.
- For **String**, click **Edit** to specify any value or to filter by selecting an Operator from Equal To, Not Equal To, or Matches Pattern and then enter a value for the string; for example, Operator = Matches Pattern and Value = Team Green.

If you select Pattern as the Operator, you must specify an SQL pattern to match the string field. The system appends the wild card character % automatically to the beginning and end of the string. You can also use any SQL wild card pattern in between the string.

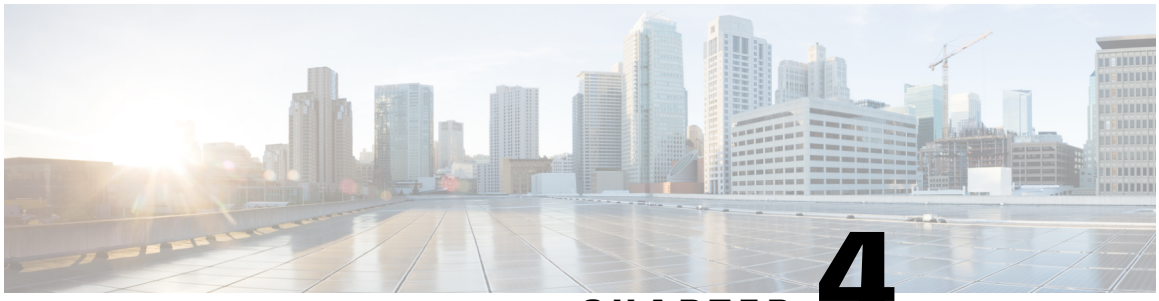
- For **Boolean**, click **Edit** to specify any value or to filter by selecting an Operator and then selecting True or False.
- If the advanced filter field is a **Value List**, click **Edit** to specify any value or to filter by moving one, all, or some items in the list to the Selected column.

Step 5 Using the **Operator** drop-down list, select the criteria.

Note If you select **Matches the pattern** operator, you can use any Microsoft SQL wildcard pattern to filter the data. The wildcard character **%** is added to the beginning and end of every string that is used to filter the data.

Step 6 In the **Value** field, enter a value against which the data in the field will be filtered.

Step 7 Click **Run**.



CHAPTER 4

Schedule Reports

- Overview, page 29
- Create a Schedule for a Report, page 30
- Configure a Scheduled Report to Be Sent by Email, page 31
- Configure a Report to Be Posted to a Remote Location, page 32

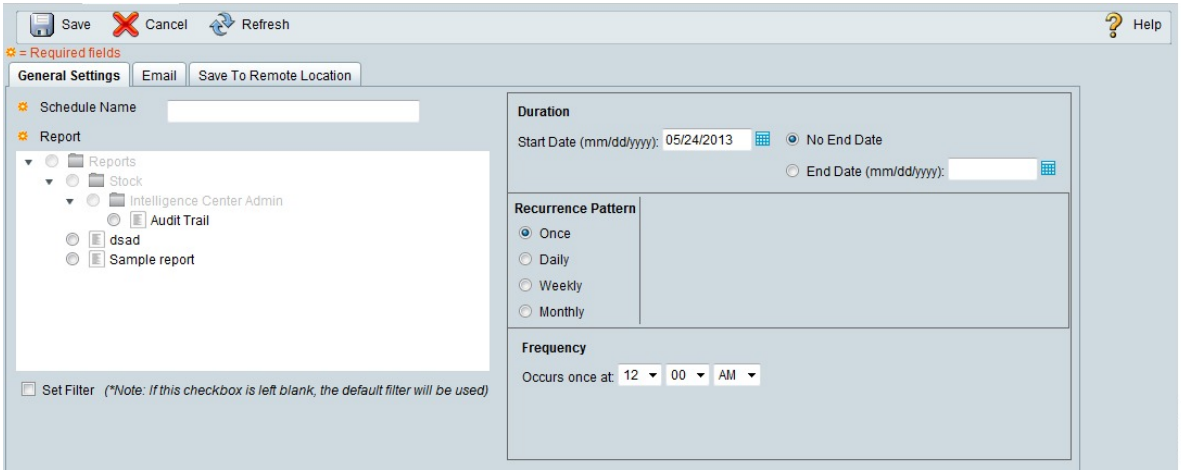
Overview

You can automate the generation of reports on a regular and recurring basis by setting up a schedule. Scheduling lets you run large dataset reports once to be sent to, and viewed by, many users.

Only users with Report Designer and System Configuration Administrator roles can access the Scheduler drawer. System Configuration Administrators can perform all scheduler function on any reports. They can read, edit and run any scheduled report and can create a schedule for any report. Report designers can create a schedule only for those reports that they created or for which they have Execute permissions.

Attention You cannot schedule Live Data reports.

Figure 6: The Report Scheduler



You can schedule reports in any one of the following ways:

- Run at predetermined times
- Automatically email reports
- Save reports to remote location

Create a Schedule for a Report

Note Some reports can be scheduled to run automatically within a dashboard. For example, an interval report can be run every 30 minutes to capture a day's activity up to the prior interval.

Note Live Data does not support scheduling.

Procedure

Step 1 In the Scheduler, click **Create**.

Step 2 In the **General Settings** tab, enter a **Schedule Name** for the scheduled report.

Step 3 In the **Report** area, select **Reports** and then select a report.

Step 4 Check the **Set Filter** check box to configure the filters. To use the default filter, do not check the check box. You cannot schedule a report that does not have a filter.

Step 5 Click the **Set filtering criteria** link to go to the filter configuration page.

Note See Types of Filters, on page 23 for more information.

Step 6 In the **Duration** section, click the calendar icon to select the **Start Date** and check **No End Date**, or use the calendar icon to **End Date**.

Step 7 In the **Recurrence Pattern** section, specify the frequency of the scheduled report. Choose from one of the following options:

- **Once—**Specify the time of day for the single occurrence.
- **Daily—**Specify a number for recurrence of days; for example, every four days.
- **Weekly—**Specify the number of weeks and the days of the week that you want the scheduled report to be run.
- **Monthly—**Select a day of the month and specify the number of months that you want the scheduled report to run.

  Note Use **Last** to specify the last day of the month.

In the **Frequency** section, specify the number of times the report should run on the scheduled days.

Note The maximum frequency with which you can schedule a report is once every five minutes.

Step 8 Click **Save**.

Configure a Scheduled Report to Be Sent by Email

In the Scheduler, click the **Email** tab to set up a schedule to email a scheduled report.

Before You Begin

Configure the email server in the Administration Console. Contact the administrator for assistance or see the *Administration Console User Guide for Cisco Unified Intelligence Center* at http://www.cisco.com/c/en/us/support/customer-collaboration/unified-intelligence-center/products-maintenance-guides-list.html.

Procedure

Step 1 In the **Email Distribution** field, click **Add**, and enter the recipient email address.

Tip Repeat Step 1 to add multiple recipients.

Note Email page validation occurs when the email ID is entered in the Email Distribution field. No validation is performed if there is no email ID entered in the Email Distribution field.

Step 2 In the **Email View** drop-down menu, select the view of the report that you want to email.

Note Only grid views can be scheduled.

Step 3 In the **Email Subject** field, enter text for the subject line.

Step 4 In the **File Type** drop-down menu, select the type of file. Choose one of the following:

- **INLINE HTML—**Sends the report in HTML format.
  - The historical report has an upper limit of 8000 rows.
  - The real-time report has an upper limit of 3000 rows.

- **XLS—**Sends the report as a Microsoft Excel file attachment.
  - The historical report has an upper limit of 8000 rows.
  - The real-time report has an upper limit of 3000 rows.

- **PDF—**Sends the report as a PDF file attachment.

  PDF attachments have the following limitations:
  - The generated PDF has either landscape or portrait orientation. Landscape orientation is the default setting.
  - The generated PDF uses standard font sizes: 10 pixels for landscape orientation and 8 pixels for portrait orientation. The PDF bypasses the font size set in grid view editor to keep the font output printer-friendly.

    Note PDF supports images only in the HTTP format.
  - The generated PDF retains rows that fit within the page for the selected orientation. Columns that do not fit within the page are truncated.
  - Only 1000 rows are supported for a PDF file attachment. An email message is sent if the scheduled report exceeds 1000 rows.
  - The generated PDF does not support word-wrap for columns. In case of larger text, you can customize the column width in the grid editor to avoid overlaps. However, this customization might reduce the number of columns shown in the PDF.
  - The generated PDF does not support multibyte characters.

Step 5 Click **Save**.

Configure a Report to Be Posted to a Remote Location

In the scheduler, click the **Save to Remote Location** tab to post a report.

Procedure

Step 1 In the **Protocol** drop-down list, select **SFTP** to establish secure connection to the remote location.

Step 2 In the **Report View** drop-down list, select the view of the report to be posted.

Step 3 In the **Host** field, enter the IP address of the remote location.

Step 4 Enter a **Port** number for the SFTP.

Note The default port number is 22.

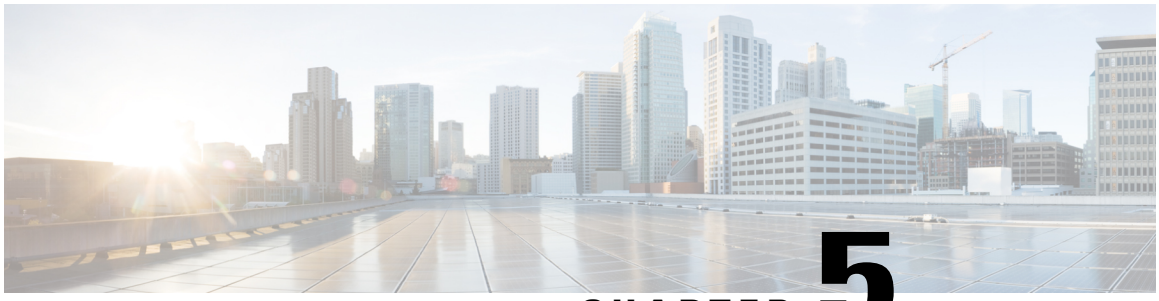
Step 5 Enter a **User name** for the host.

Step 6 Enter a **Password** for the host.

Step 7 In the **Directory Path** field, enter the location on the host to save your **.csv** file to.

Step 8 Click **Save**.

Note Date Time format in a scheduled report of type CSV is : Day_of_week Month Date_of_Month HH:MM:SS SERVER_TIMEZONE YYYY. For Example, Fri Oct 24 01:00:00 EDT 2014.



CHAPTER 5

Dashboards

- Overview, page 35
- Create Dashboard, page 35
- Add Item to Dashboard, page 36
- Create Subcategory, page 37

Overview

Dashboard is a unique feature of Cisco Unified Intelligence Center, which lets you display multiple objects like a web page, some widgets, and some reports in a consolidated view. Dashboards are contained in categories and sub-categories.

Note You can view or create a dashboard only if have permissions to that category or sub-category.

Create Dashboard

Follow these steps to create a dashboard.

Procedure

Step 1 Click the **Dashboard** tab.

Step 2 On the **Dashboard** tab, right-click the folder where you want to place the dashboard, and select **Create Dashboard**.

Step 3 Name the dashboard in the **Create Dashboard** window.

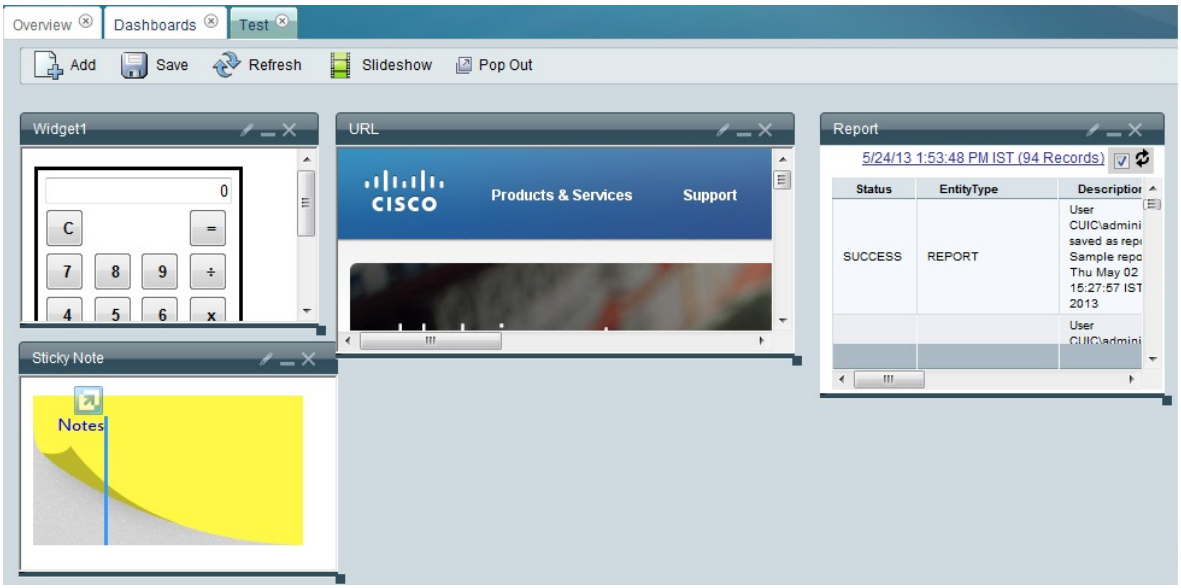
Step 4 Assign permissions to users, and click **OK**.

Add Item to Dashboard

You can add the following items to a dashboard:

- Report: Display an existing report on the dashboard.
- Schedule: Display a scheduled report on the dashboard.
- URL: Display a web page on the dashboard.
- Sticky Note: Add sticky notes to the dashboard.
- Custom Widgets: Add custom widgets to the dashboard.

Figure 7: Widgets on the Dashboard



Follow these steps to add items to the Dashboard.

Procedure

Step 1 Click **Dashboards** drawer.

Step 2 Click the dashboard that you want to add items to.

Note You can also create a dashboard and add items to it. See Create Dashboard, on page 35.

Step 3 On the dashboard, click **Add**.

Step 4 In the **Title** box, enter the name of the item.

Step 5 From the **Type** drop-down list, select the type of item that you want to add.

Step 6 In the **Size** section, define the width and height of the item in pixels.

Step 7 In the **Position** section, define how far the item will be placed from the left side and from the top of the dashboard.

Step 8 In the **Dashboard Item Content** section, define the dashboard item that you selected in Step 5.
To display a report:

a) Click the arrows to navigate through the folders to the report that you want to display on the dashboard.
b) Select the report.
c) Click **OK**.

To display a **scheduled report**:

a) Select the schedule from the **Schedule** box.
Note You can search for the schedule using the **Search schedule** box.
b) Click **OK**.

To display a **URL**:

a) In the **URL** box, enter the address of the web page that you want to display on the dashboard.
b) Click **OK**.

To display a **custom widget**:

a) In the **Content** box, enter Java code of the widget that you want to show on the dashboard.
b) Click **OK**.

To display a **Sticky Note**:

a) In the **Content** box, enter content for the sticky note.
b) Click **OK**.

Create Subcategory

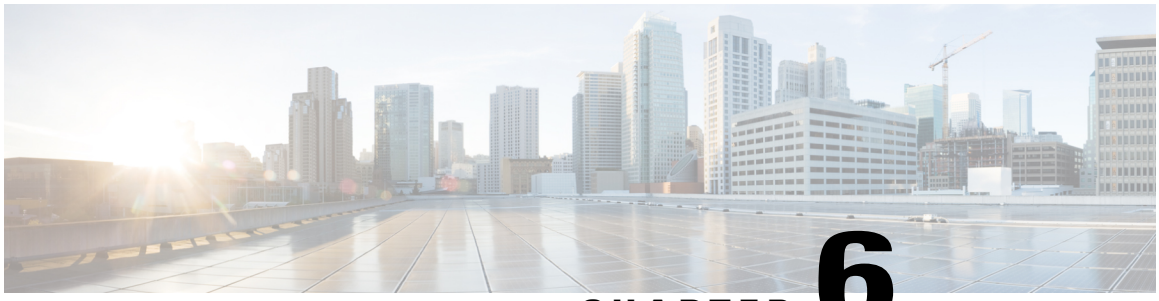
Reporting users do not have permission by default to create a subcategory under Reports. An Administrator should create a subcategory and grant access, so you can create a subcategory within the new subcategory.

Procedure

Step 1 Right-click the folder where you want to create the subcategory and select **Create Sub-category**.

Step 2 In the **Create Category** window, enter a name for the category.

Step 3 Assign permissions in the **Permissions** section.



CHAPTER 6

Permalinks

- Overview, page 39
- Create a Permalink for a Dashboard, page 40
- Create Permalink for a Report, page 40
- Create Permalink for Finesse Gadget Equivalent Live Data Report, page 41
- Permalinks for Supervisor Live Data Reports, page 42

Overview

Permalinks in Cisco Unified Intelligence Center are permanent hyperlinks.

Unified Intelligence Center supports the following types of permalinks for reports:

- **Excel Link:** This permalink is generated only for grid view.
- **Html Link:** This permalink is generated for grid view, gauge view, and chart view.
- **XML Link:** This permalink is generated only for the grid view. It is used where the data is required in XML format.

Note For Live Data reports, you will only have the Html permalink. Html permalink for Live Data reports always require authentication.

Note Due to security reasons, permalinks from one Unified Intelligence Center cannot be displayed in the dashboard of another Unified Intelligence Center instance.

Create a Permalink for a Dashboard

Note Dashboard permalink can be accessed only from a web browser. It cannot be accessed by an application like Microsoft Excel to pull data or display a dashboard.

The permalink to a dashboard is created when you create the dashboard. To retrieve the permalink to a dashboard, follow these steps:

Procedure

Step 1 Click the **Dashboards** in the left pane.

Step 2 Navigate to a dashboard.

Step 3 Right-click the dashboard, and select **Html Link**.

Step 4 Copy the **Html Link**. This is the permalink to the dashboard.

Note Check the **Enable Unauthenticated Access** check box if you want the permalink to be accessible without authentication.

Note Permalinks will work in the unauthenticated mode when the **Enable Unauthenticated Access** check box is checked.

Note For dashboards that contain Live Data report, the check box for **Enable Unauthenticated Access** should not be selected.

Step 5 Click **OK**.

Create Permalink for a Report

Procedure

Step 1 Save the report. See Save an Existing Stock Report, on page 19.

Step 2 Click **Edit Default Filter** and set the filter options.

Step 3 Click **Save**.

Step 4 Check the **Bypass Filter Dialog** check box.

Step 5 Click **Save**.

Step 6 Click **Edit Views**.
The **Available Views** window opens in a separate tab.

Step 7 In the **Available Views** window, select the required view and click **Links**.

Step 8 Check the **Enable Unauthenticated Access** check box if you want the permalink to be accessible without authentication.

Note For Live Data reports, the **Enable Unauthenticated Access** check box is disabled.

Step 9 In the report tab, click **Save** .

Step 10 In the **Available Views** tab, copy the permalink that you want and paste it on the desired browser.

Note For Live Data reports, only the HTML permalink is available.

Create Permalink for Finesse Gadget Equivalent Live Data Report

For permalinks of supervisor stock reports, see Permalinks for Supervisor Live Data Reports, on page 42. To create a permalink for saved stock reports follow the below procedure:

Procedure

Step 1 Copy the permalink of the stock report that you want to customize from Permalinks for Supervisor Live Data Reports, on page 42 and paste it in a text editor.
Example:

Consider the below URL as the permalink. Copy and paste it in a text editor. The underlined ID is the value of viewID.

```
https://<Server Name>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=
5C90012F10000140000000830A4E5B33&linkType=htmlType&viewType=Grid&ResourceIAQStats.resourceId=CL
```

Step 2 Click **Reports** in the left pane.

Step 3 Navigate to the custom report.

Step 4 Right-click the report and select **Edit Views**.
The **Available Views** window opens in a separate tab.

Step 5 In the **Available Views** window, select the required view and click **Links**.

Step 6 Copy the permalink of the customized report from the **Html Link** field, and paste it in a text editor, and then copy the viewID value from this link.
Example:

Copy the underlined viewID value from the permalink of the customized report.

```
https://10.78.91.51:8444/cuic/permalink/PermalinkViewer.htmx?viewId=B27986B510000142000004D60A4E5B33
&linkType=htmlType&viewType=Grid
```

Step 7 Replace the viewID value in the stock report permalink with the viewID value from the permalink of the customized report.
Example:

The customized report permalink appears as shown below after replacing the viewID value with the viewID value of the customized report.

```
https://<Server Name>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=
B27986B510000142000004D60A4E5B33&linkType=htmlType&viewType=Grid&ResourceIAQStats.resourceId=CL
```

Step 8 Copy this permalink and paste it in the broswer.

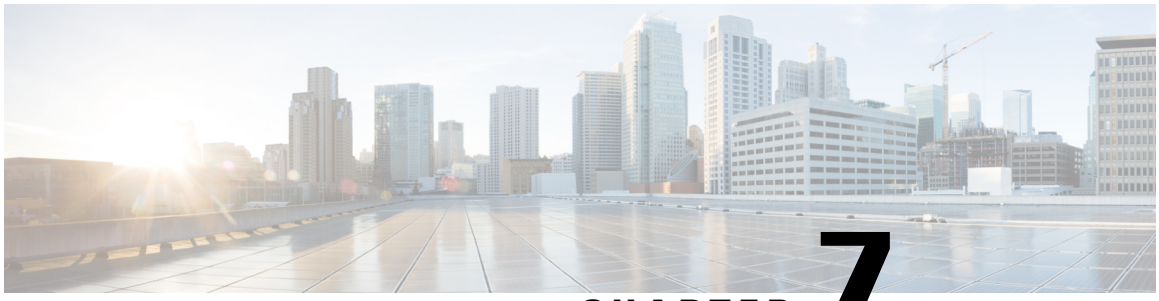
Permalinks for Supervisor Live Data Reports

The following table presents the permalinks for supervisor reports. Replace `<Server Name>` with the IP address of Unified CCX node.

Note Permalinks are not supported for agent reports.

Table 2: Permalinks for Supervisor Live Data Reports

Report	View	Permalink
Agent Outbound Team Summary Report	Since Midnight	https://<Server Name>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=FD919FB910000140000005D0A4E5B29&linkType=htmlType&viewType=Grid
	Short and Long Term Average	https://<Server Name>:8444/cuic/permalink/PermalinkViewer.htmx?viewId= FD919FB510000144000000470A4E5B29&linkType=htmlType&viewType=Grid
Chat Agent Statistics Report	—	https://<Server-FQDN>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=F2F1FC1710000144000000E0A4E5D48&linkType=htmlType&viewType=Grid&ChatAgentStats.agentId=CL
Chat CSQ Summary Report	—	https://<Server-FQDN>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=E42ED78810000144000000B0A4E5CA1&linkType=htmlType&viewType=Grid&ChatQueueStatistics.queueName=CL
Team State Report	—	https://<Server Name>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=5C90012F10000140000000830A4E5B33&linkType=htmlType&viewType=Grid&ResourceIAQStats.resourceId=CL
Team Summary Report	Since Midnight	https://<Server Name>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=728283C210000140000000530A4E5B33&linkType=htmlType&viewType=Grid&ResourceIAQStats.resourceId=CL
	Short and Long Term Average	https://<Server Name>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=7291DCB410000140000000890A4E5B33&linkType=htmlType&viewType=Grid&ResourceIAQStats.resourceId=CL
Voice CSQ Agent Detail Report	—	https://<Server Name>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=9A7A14CE10000140000000ED0A4E5E6B&linkType=htmlType&viewType=Grid&VoiceCSQDetailsStats.agentId=CL&VoiceCSQDetailsStats.AgentVoiceCSQNames.agentVoiceCSQName=CL
Voice CSQ Summary Report	Snapshot	https://<Server Name>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=C8E2DB1610000140000000A60A4E5E6B&linkType=htmlType&viewType=Grid&VoiceIAQStats.esdName=CL
	Since Midnight	https://<Server Name>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=C8EF510810000140000000EB0A4E5E6B&linkType=htmlType&viewType=Grid&VoiceIAQStats.esdName=CL
	Short and Long Term Average	https://<Server Name>:8444/cuic/permalink/PermalinkViewer.htmx?viewId=C8EE241910000140000000C30A4E5E6B&linkType=htmlType&viewType=Grid&VoiceIAQStats.esdName=CL



CHAPTER 7

Visual Customizations

- Overview, page 45
- Create a Grid View, page 45
- Create a Gauge View, page 46
- Create a Chart View, page 47
- Grouping, page 49
- Set Threshold Indicators for Fields, page 50

Overview

Stock reports are the reports that are pre-bundled and supported by Cisco. The stock reports can be copied and these copied versions can be edited to visually customize them. Save a copy of the report with a different name.

Note Reporting users do not have permission by default to create a subcategory under Reports. An Administrator should create a subcategory and grant access, so you can create a subcategory within the new subcategory.

Create a Grid View

Grids are tabular presentations of the data in rows and columns. By default, all Cisco stock reports have a grid view. You can create additional grid views for the stock reports. For custom reports, a default grid is created from the SQL query in the Report Definition.

Note Grouping is not supported in Live Data reports.

The steps below describe how to create a Grid View:

Procedure

Step 1 Navigate to **Reports**.

Step 2 Click **Reports** to display **Available Reports**.

Step 3 Expand the **Reports** folder.

Step 4 Locate the report in the appropriate folder.

Step 5 Right-click on the report and select **Edit Views**. A new tab that contains all the views of the report opens.

Step 6 Under **Create**, select **Grid** from the drop-down list. A new page opens.

Step 7 Enter the **Name** and **Font Size** in the fields provided.

Note The font size is not supported for Live Data reports.

Step 8 Enter a **Description** for the grid view.

Step 9 Select the required fields for the grid view in **Available Fields**.

Step 10 Click **Select** to add the selected fields to **GridHeaders** in the **Current field order in the grid** box. You can also perform the following:

a) Click **Select All** to add all the available fields to **GridHeaders**.
b) Click **Add Header** to add a new folder in **GridHeaders**.
c) Click **Remove Selected** to remove an item in **GridHeaders**.
d) To group reports, click the **Grouping** button to open a new page.
e) Specify the appropriate value for **Number Of Groups**.
f) Select the appropriate value for **Unique Value Vertical Alignment**.
g) Click the drop-down list corresponding to **Sorted By** and select the appropriate field.
h) Click **OK**. The previous window opens.

Note For more information on grouping, see Grouping, on page 49 .

Step 11 Click **Save** to save the new view you have created.

Step 12 Click **Save As** to rename the view.

Step 13 Click **Cancel** to abort the changes and exit the Grid Editor.

Create a Gauge View

Gauges display the status of a single report metric (number). They are not intended to display multiple metrics or complex interrelationships. A gauge in Unified Intelligence Center is similar in function and in appearance to the speedometer in your automobile. The gauges you design in Unified Intelligence Center are semicircular graphics with a moving needle. Gauges show a visual indicator that a value is within a normal range.

Note Live Data reports does not support Gauge view.

Note If the field does not have a footer, you see an error saying that the footer value is null or is not a number when you run the report. You need to set the footer for the field.

The steps below describe how to create a Gauge View:

Procedure

Step 1 Navigate to **Reports**.
Step 2 Click **Reports** to display **Available Reports**.
Step 3 Expand the **Reports** folder.
Step 4 Locate the report in the appropriate folder.
Step 5 Right-click on the report and select **Edit Views**. A new tab that contains all the views of the report opens.
Step 6 Under **Create**, select **Gauge** from the drop-down list. A new page opens.
Step 7 Click the drop-down corresponding to **Field**, and select the appropriate field.
Step 8 Enter the **Name, Description, Range** and **Number of scale markers** in the fields provided.
Step 9 Select the appropriate **Scale options**.
Step 10 Under **Thresholds**, enter the appropriate **Value** for each threshold level.
Step 11 Check the check box corresponding to a specified level to set the threshold levels.
Step 12 Check the check box corresponding to **Level** to set all the four threshold levels.
Note The four predefined threshold levels are **Warning**, **Minor**, **Major** and **Critical**. You can see a graphical preview of the Gauge when you select the threshold levels using the check boxes.
Step 13 Click **Save As** to save and rename the gauge view.
Step 14 Click **Save and close** to save and close the gauge view.
Step 15 Click **Save** to save the new gauge view.
Step 16 Click **Refresh** to reset the values in the page.
Step 17 Click **Cancel** to abort the changes and exit the Gauge View editor.

Create a Chart View

Cisco Unified Intelligence Center offers three types of charts, namely Pie, Column, and Line Chart.

- Pie--Pie charts present quantities as proportions of a whole. The circle (pie) represents 100% of the data, with each quantity represented as a wedge of the appropriate size. Pie charts take decimal/numeric fields only. A pie chart cannot have more than 50 wedges. If your data set and chart editor selections generate a pie chart with more than 50 wedges, an error is displayed.
- Column--Column (Bar) charts display discontinuous events and show the differences between events rather than trends. Column charts can be oriented vertically or horizontally and can be stacked vertically or clustered side-by-side.
- Line charts--Line charts show continuous quantities over time against a common scale. They are good for showing trends.

Note Live Data reports does not support Chart view.

Note In Cyrillic characters, for vertically oriented charts, the data labels in the Horizontal Axis field may not appear at all or may be garbled. This is a known underlying limitation. You should view the horizontally oriented charts for Cyrillic.

The steps below describe how to create a Chart View:

Procedure

Step 1 Navigate to **Reports**.

Step 2 Click **Reports** to display **Available Reports**.

Step 3 Expand the **Reports** folder.

Step 4 Locate the report in the appropriate folder.

Step 5 Right-click on the report and select **Edit Views**. A new tab that contains all the views of the report opens.

Step 6 Under **Create**, select **Chart** from the drop-down list. **General Settings** page opens.

Step 7 Click the drop-down list corresponding to **Chart Type**, and select the appropriate field.

Step 8 Enter the **Chart Name,** and **Chart Description** in the fields provided.

Step 9 Check the check boxes corresponding to the following based on your requirement:

- **Accessible Mode**: Check this box to add fill patterns (stripes and dots) to chart colors and make them easier to distinguish.
- **Dynamic Dataset**: For line and column charts, check this to transform data into a summarized format.
  Note Not available for pie charts.

  Line and column charts use Dynamic Dataset OR Use Report Footer, but not both.
- **Use Report Footer**: Check this if you want the repeated data in the chart to be grouped or collapsed by the field's footer.
  Note Line and column charts use Dynamic Dataset OR Use Report Footer, but not both.

Step 10 Click on the drop-down list box next to **Legend Placement** to select either **Right** or **Bottom**.

Step 11 Specify the value for **Maximum Legend Label Length**.

Step 12 Under **Data Change Effect**, click the drop-down list box next to **Type** to select the appropriate field.

Step 13 Click **Next** to open **Series Settings** page.

Step 14 Under **Series**, click the drop-down list boxes next to **Data Field** and **Label Field** to select the appropriate fields.
Note This option is applicable only for Pie chart series.

Step 15 Under **Labels**, click the drop-down list boxes next to **Label Position** and **Label Format** to select the appropriate fields.

Note This option is applicable only for Pie chart series.

Note Skip steps 16 to 20 for Pie chart series. Perform these steps only for Line Charts and Column Charts series.

Step 16 Click **Next** to open the **Column Chart Series Settings** page.

Step 17 Select the **Axis: Type and Fields**. This panel appears on the right if you select a vertical orientation on the General Settings page. It appears on the left if you select a horizontal orientation.

Step 18 Click **Next** to open the **Column Chart Series Settings Series Descriptions/Legend Labels** page.

Step 19 Enter the **Horizontal Axis Type** and **Vertical Axis Type** information. Axis Type option(s) are determined by the data type of the field.

Step 20 Click **Next** to open the **Summary** page.

Step 21 Click **Save & Preview** button to preview the chart.

Step 22 Click **Save & Exit** to save the chart and exit the page.

Step 23 Click **Cancel** to abort the changes and exit the **Chart Editor**.

Grouping

Note Live data reports does not support grouping.

Follow these steps to format the report groups:

Procedure

Step 1 Select the **Reports** drawer in the left pane.

Step 2 Right-click the report in which you want to format the grouping , and select **Edit views**.

Step 3 Select the view where you want to format the grouping, and click **Edit**.

Step 4 Click the **Grouping** button to open a new page.

Step 5 Specify the appropriate value for **Number of Groups**. You can select zero, one, two, or three groups in the report.

Step 6 From **Unique Value Vertical Alignment**, select **Top**, **Middle**, or **Bottom** to specify where you want the name of the group to display in the report column.

Note
- Check the **Show Summary Only** check box if you want to see only the summary and is available for all fields.
- Thresholds will not be visible in a grouped field and on summary rows.

Step 7 From **Grouped By**, choose a value from the drop-down list. The report data is grouped by this value.
If you choose a date or date and time value from the drop-down list, select one of the following options:

- None--The report data is grouped by the value and not by day, week, or by month.
- Daily--The report data is grouped by day.
- Weekly--The report data is grouped by week.

- Monthly--The report data is grouped by month.

Step 8 Check the **Show Summary** check box to include a summary row in the report for the grouping. For example, if you group by Agent Team and check the **Show Summary** check box, a row of summary data for each team is displayed.

Note
- When you check the **Show Summary Only** check box, the **Show Summary** check box becomes unavailable.
- When you check the **Show Summary Only** check box for grouping, reports can be sorted by columns defined in **Grouped By** only.

Step 9 From **Sorted By**, choose a value from the drop-down list. The report data is sorted by this value.

Step 10 Click **OK**.

Note You cannot perform a drilldown from Grouped fields. To determine if a field is grouped:

- Open the Grid Editor for the report. Click **Grouping**.
- From the **Grouping** dialog box, determine if the field appears in any of the **Grouped By** fields.

Set Threshold Indicators for Fields

You can set threshold indicators for fields to show if a field value crosses or falls behind a particular value. Threshold indicators can be set only for views of type **Grid** and **Gauge**.

Setting threshold values for a **Gauge** view is described in the procedure for creating a gauge view. For more information about creating a **Gauge** view, see Create a Gauge View, on page 46.

For more information about creating a **Grid** view, see Create a Grid View, on page 45. For setting field threshold indicators for a **Grid** view, follow the steps below.

Procedure

Step 1 Select the **Reports** drawer in the left pane.

Step 2 Right-click the report in which you want to set the field thresholds, and select **Edit views**.

Step 3 Select the view where you want to set the field thresholds, and click **Edit**.

Step 4 In the box **Current field order in the grid**, right-click the field for which you want to set thresholds, and select **Thresholds**.

Step 5 In the thresholds window, click **Add** to add a new threshold.

Note
- You are recommended not to configure more than 30 thresholds for a field.
- To edit an existing threshold, select the threshold, and click **Edit**.

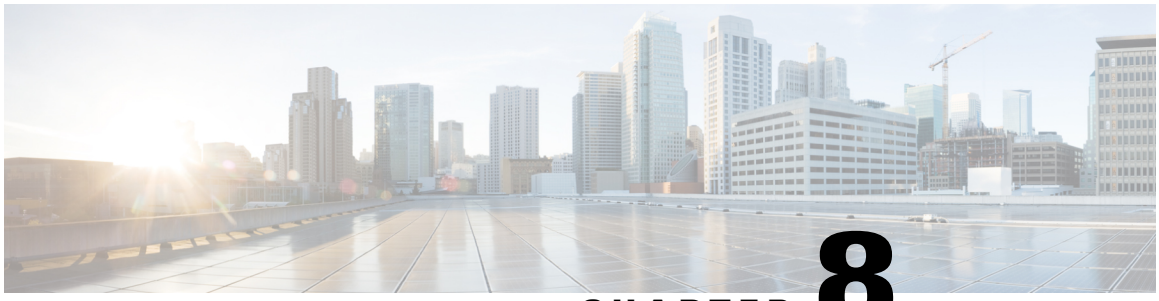
Step 6 In the **Type** drop-down list, select the condition by which you want the threshold values to be checked against the current value of the field. In the field that appears next, enter a value or expression as required.

Note If you are using an expression, check the **Regular Expression** check box.

Step 7 Format the text in the field to appear when it matches the threshold condition. Use the following options:

a) **Bold—**Check the check box to bold the text.
b) **Text Color—**Select a color for the text in the field.
c) **Background Color—**Select a background color for the field.
d) **Text Substitute—**Enter a new string if you want the text in the field to be replaced with it when it matches the threshold condition.
e) **Image Location—**Enter the path of the image if you want the text to be replaced with an image if it matches the threshold condition. You can either use the image URL or path.

Step 8 Click **OK**.



CHAPTER 8

FAQs

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Overview

This chapter presents reporting-related Frequently Asked Questions (FAQs).

The following abbreviations are used for database records:

- ACDR—AgentConnectionDetail record in the AgentConnectionDetail table

- ASDR—AgentStateDetail record in the AgentStateDetail table
- CCDR—ContactCallDetail record in the ContactCallDetail table
- CQDR—ContactQueueDetail record in the ContactQueueDetail table
- CRDR—ContactRoutingDetail record in the ContactRoutingDetail table

General

Q. How is the number of days calculated in Historical reports?

A. The number of days is calculated by an SQL function that counts the number of calendar days. Fractions of a day are counted as an entire day. This table provides an example.

Time Range	Number of Days
10 a.m. (1000) on 5/15 to 10 a.m. (1000) on 5/16	Two days
12:00:00 a.m. (0000) on 5/15 to 11:59:59 p.m. (1159:59) on 5/15	One day
12:00:00 a.m. (0000) on 5/15 to 12:00:00 a.m. (0000) on 5/16	Two days

Q. Which reason codes are supported for reports?

A. When reason codes are configured, agents enter the reason codes when explicitly transitioning to Logout state or to Not Ready state. These reason codes are stored in the ASDR.

The following reports provide the details:

- **Agent Login Logout Activity Report—**Presents the logout reason code in detail.
- **Agent Not Ready Reason Code Summary Report—**Presents summary information for the Not Ready reason code.
- **Agent State Detail Report—**Presents Logout reason code and Not Ready reason code in detail.

Note Not Ready codes are systemwide and cannot be configured to be hidden from certain agents.

In the following cases, reason codes are not stored. In these cases, the reasonCode field in the ASDR contains a value of –1.

Case	Agent State in ASDR
Agent closes the Cisco Agent Desktop without logging out	Logout

Case	Agent State in ASDR
IP Phone Agent server or Cisco Agent Desktop crashes	Logout
Agent logs out when logged in to another computer or phone	Logout
Normal agent login	Not Ready
Agent receives an IVR call on ICD extension	Not Ready
Agent goes off-hook on ICD extension to place a call	Not Ready
Agent fails to answer an ACD call within the specified timeout period	Not Ready
Agent does not answer an ICD call	Not Ready
Agent's phone goes down	Not Ready or Logout
Supervisor changes the agent's state from the Cisco Supervisor Desktop	Not Ready or Logout

Q. Which database is used for Unified CCX?

A. Unified CCX uses IBM Informix Dynamic Server (IDS) database.

Q. Why is the **Contact Service Queue Service Level Report**, which is available in previous versions of Unified CCX, no longer available in the current version?

A. The information that was in this report is distributed among the *Contact Service Queue Service Level Priority Summary Report*, the *Contact Service Queue Activity Report*, and the *Contact Service Queue Call Distribution Summary Report*.

Q. Why is the **Skill Routing Activity Report**, which is available in previous versions of Unified CCX, no longer available in the current version?

A. The information that was in this report is available in the *Contact Service Queue Activity Report* or in the *Contact Service Queue Activity Report* when filtered to show Skill Groups only.

Q. What can cause more than one record to have the same node ID, session ID, and sequence number?

A. In the following scenarios, more than one record can have the same node ID, session ID, and sequence number:

- A call is conferenced to a CTI route point.
- A call rings at an agent's phone, but the agent does not pick up. The call is categorized as Ring No Answer (RNA) to the agent.

Q. Why are some of the selected filter parameters not included in the generated report?

A. The length of each parameter to the report must not exceed 800 characters. If the selected parameters exceed this value, then the database server truncates the parameter to the first 800 characters.

The stored procedure receives only the first 800 characters of the chosen parameters; the rest are not included in the generated report.

Q. How can I export historical data to my own data warehouse?

A. Use third-party database administration tools such as SQuirreL SQL Client or AGS Server Studio to export Unified CCX historical data to your own data warehouse. Use uccxhruser as the username to connect to db_cra database.

Q. Can I connect the embedded Unified Intelligence Center to 3rd party databases or a different Unified CCX / Unified IP-IVR deployment for reporting purpose?

A. No, it is not supported. Addition of external data source in Unified Intelligence Center will be blocked in future releases.

Q. Can I use 3rd party software to access Unified CCX IBM Informix Dynamic Server (IDS) database for reporting purpose?

A. Yes, but it should be used with discretion keeping in mind the impact on the system.

Availability of Reporting Data

Q. Which report shows calls per hour per CSQ? For example: 7:00 a.m. to 8:00 a.m., 25calls; 8:00 a.m. to 9:00 a.m., 35 calls; and 9:00 a.m. to 10:00 a.m., 34 calls.

A. The **Contact Service Queue Activity Report by Interval** shows this information. To generate this report for one-hour intervals, set its Interval Length filter parameter to sixty (60) minute intervals.

Q. How can I determine telephone numbers of calling parties?

A. The Call ANI fields on the **Abandoned Call Detail Activity Report** and the **Agent Detail Report** show this information.

Q. How is the following scenario reported? A call is in queue and it is routed to an available agent who does not answer the call, so the call is redirected to another agent.

A. The scenario appears in the following reports:

- The **Agent Detail Report** shows two lines:
  - For the agent who did not answer the call—Ring time is greater than 0; talk time, hold time, and work time are each zero.
  - For the agent who answered the call—Talk time is greater than 0.
- The **Agent Summary Report** shows the following:

- The call was presented to the agent who did not answer the call, but was not handled by that agent.
- The call was presented to and handled by the agent who answered the call.

- The **CSQ Agent Summary Report** shows the call as Ring No Answer (RNA) for the first agent.

Q. How can I determine the start time and the end time for a call with multiple legs?

A. The following fields identify the various legs of a call:

- The sessionID fields in the Unified CCX database tables contain the same value for a particular call. These fields identify all the database records that relate to a call.
- The sessionSeqNum fields in the Unified CCX database tables start at 0 and increment by 1 for each leg of a call.
- The startDateTime field of the CCDR stores the start time of a call. The sessionSeqNum is equal to 0, and the sessionID value identifies the call.
- The endDateTime field of the CCDR with the highest sessionSeqNum and the same sessionID value stores the end time of a call.

Note The way in which sessionID and sessionSeqNum values are written to the database depend on the call scenario. For more information and examples, see the "Interpret Database Records" section of *Cisco Unified Contact Center Express Report Developer Guide*, located at:

http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_installation_and_configuration_guides_list.html.

Q. Which report displays information on menu choices?

A. You can create a custom report to show menu choices. Use the **Set Session Info** step in a workflow to store the custom variables entered by the callers. The contents of such custom variables are stored in the customVariable fields in the CCDR. Use the information in the CCDR customVariable fields when you create custom reports.

The following is an example of how to prepare a report to show information for a menu with three choices (1, 2, and 3):

1. For a workflow, define a variable of type session and name it this_session.
2. Place a **Get Contact Info** step at the beginning of the workflow.
3. Set the **Session** attribute to variable this_session.
4. Define a **Menu** step that has three branches and place a **Set Enterprise Call Info** step in each branch.
5. In the **General** tab of the **Set Enterprise Call Info** step, click **Add**.
6. In the branch for caller-choice 1, enter 1 in the **Value** field, and choose Call.PeripheralVariable1 from the **Name** drop-down list.
7. In the branch for caller-choice 2, enter 2 in the **Value** field, and choose Call.PeripheralVariable2 from the **Name** drop-down list.

8 In the branch for caller-choice 3, enter 3 in the **Value** field, and choose Call.PeripheralVariable3 from the **Name** drop-down list.

9 Create a custom report that will show the values of the customVariable1, customVariable2, and customVariable3 fields in the CCDR.

If calls are to be transferred between workflows and multiple menu choices can be made for a single session, take care to preserve previously entered menu choices. For example, place a **Get Session Info** step at the beginning of the workflow. If the _ccdrVar1 variable is null, there were no previous entries. If it is not null, when you add a new choice, determine a format for associating a menu choice to a sequence number. In this way, you will be able to prepare accurate reports.

Q. If a Unified CCX system does not include a license for Historical reports, is data still written to the Unified CCX databases?

A. Yes.

Q. Which report has information on agent Service Level Agreements (SLAs), such as Cisco Agent Desktop queue time threshold (caution, warning) and agent talk time SLA (caution, warning)?

A. There are no reports available, but the Unified CCX databases store this data. You can create a custom report to show this information.

Q. Which report has information about calls that were transferred by agents to another Contact Service Queue?

A. The **Detailed Call CSQ Agent Report** has information about transferred calls. The session ID remains the same for a transferred call, but the session sequence number increments by 1. This report also shows the agent who handled each call, and the CSQ to which the call was routed.

Q. A record that contains data is stored in memory and is ready to be written to the Unified CCX database, when is it written to the database?

A.
- Call records (CCDR, CRDR, CQDR) are written after each call is completed.

Note CCDRs are written after the agent leaves Work state, when applicable. Otherwise, they are written after the call ends.

- Agent state records (ASDR) are written after agents change state.
- Agent connection records (ACDR) are written when an agent leaves Work state or after the call completes if the agent does not go to Work state.

Q. Are there summary tables for daily data that contain the data for a specific day? Are these tables used to create weekly data tables? Are weekly data tables used to create monthly data tables?

A. The system stores detailed data. It does not summarize detailed tables to create daily, weekly, or monthly tables.

Q. Which monthly report shows statistics for service levels?

A. The **Contact Service Queue Activity by CSQ** or **Contact Service Queue Activity by Interval** shows information about service levels provided to handled calls. Schedule the **Contact Service Queue Activity by CSQ** or **Contact Service Queue Activity by Interval** to run monthly.

Q. Can I create custom Historical reports?

A. Yes. For more information about creating custom reports, see the "Create Custom Reports" section of *Cisco Unified Contact Center Express Report Developer Guide*, located at:

http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_installation_and_configuration_guides_list.html.

Data Reconciliation Among Reports

Q. Why does the **Detailed Call by Call CCDR Report** show more handled calls than the CSQ reports?

A. The CSQ reports show calls that are handled by agents after the calls are queued for a CSQ. The **Detailed Call by Call CCDR Report** shows these calls and also the calls that are marked as handled by a workflow script before they are queued for a CSQ.

Q. Why does the **Application Performance Analysis Report** show more presented, handled, and abandoned calls than the CSQ Reports?

A. The following are the two reasons:

- An incoming call can invoke multiple applications because each leg of the call invokes a different application. The call is counted once for each application.
- Calls that are hung up before being queued for any CSQ are marked as handled or abandoned depending on the workflow, and also depending on when they are hung up. Such calls do not have CRDRs or ACDRs and will not be counted for CSQ reports or agent reports. These calls will be counted for the **Application Performance Analysis Report** because the calls entered an application.

Q. Why does the **Agent Summary Report** show more handled calls than the CSQ reports?

A. Conference calls to agents result in one CRDR that has multiple ACDRs. The **Agent Summary Report** counts the number of ACDRs, but the CSQ reports count the number of CRDRs.

Q. How can I identify conference calls?

A. To identify conference calls, search for ACDRs with the same session ID and sequence number, with different agent IDs, and with talk time greater than 0.

Q. How to identify calls that were presented to an agent, but were not answered?

A. To identify calls that were not answered by an agent, search for ACDRs with talk time equal to zero. The **CSQ Agent Summary Report** shows the total number of Ring No Answer (RNA) calls for each agent and for each CSQ. In the **Agent Summary Report**, the number of Ring No Answer calls = Calls Presented – Calls Handled.

Q. Why is the total number of calls in the Calls Handled field in the **Contact Service Queue Activity Report** lower than the number in the Calls Handled Field in the **Agent Summary Report**?

A. The CSQ reports, including the **Contact Service Queue Activity Report** show activity at the CSQ level. The agent reports, including the **Agent Summary Report**, show activity at the agent level.

For handled calls, the **Agent Summary Report** counts the ACDRs with non-zero talk time (to exclude unanswered calls), and the **Contact Service Queue Activity Report** counts CQDRs with disposition equal to 2 (handled).

The number of such ACDRs may be larger than the number of such CQDRs for any of the following reasons:

- If you choose all the agents for the **Agent Summary Report**, but choose only one CSQ for the **Contact Service Queue Activity Report**, the **Agent Summary Report** will show more handled calls.
- There may be conference calls that involve multiple agents. In such cases, one CQDR has multiple associated ACDRs. An associated ACDR has the same sessionID and sessionSeqNum as the CQDR.
- Agent-to-Agent transfers will result in more ACDRs than CQDRs. If Agent1 picks up a call from CSQ1, one CQDR and one ACDR are created. When Agent1 transfers the call to Agent2, another ACDR is created, but no CQDR is created.

Q. Why do the **Agent Summary Report**, **Contact Service Queue Activity Report**, and **Application Performance Analysis Report** show different values for Calls Presented field?

A. The **Application Performance Analysis Report** shows the highest number of presented calls for the following reasons:

- An incoming call can invoke multiple applications, because each leg of the call can invoke a different application. The same call is counted once for each application.
- Some calls are terminated before they are queued. Such calls do not have CRDRs (because they are not queued) and are not counted for the **Contact Service Queue Activity Report**. These calls do not have ACDRs as well and are not counted on the **Agent Summary Report**.

The **Agent Summary Report** shows more presented calls than the **Contact Service Queue Activity Report** for either of the following reasons:

- The same call is queued to a certain CSQ, but is presented to multiple agents within the CSQ (because an agent did not answer). Such calls are counted once for the **Contact Service Queue Activity Report**, but counted once for each agent involved for the **Agent Summary Report**.
- There are conference calls that involved multiple agents.

Q. Why is the number of abandoned calls in the **Abandoned Call Detail Activity Report** higher than the number of abandoned calls in the **Contact Service Queue Activity Report**?

A. Some calls shown in the **Abandoned Call Detail Activity Report** are abandoned before they are routed to a CSQ (these calls have a blank Call Routed CSQ field), so they are not counted for any CSQ. The **Contact Service Queue Activity Report** shows calls that are abandoned while they are queued for a CSQ.

Q. Why is there a difference in maximum handle time between the **Contact Service Queue Activity Report** and the **Agent Summary Report**? For example, if Agent1 belongs only to CSQ1 and CSQ1 does not include any other agent. Why is the Max Handle Time field for Agent1 on the **Contact Service Queue Activity Report** different than the Handle Time—Max field for Agent1 on the **Agent Summary Report**?

A. Consider this example: An agent from another CSQ handled the call, in conference with Agent1, and then dropped out. In addition, Agent1 continued the call for longer than the longest talk time of the any call that the agent handled for CSQ1. In this case, the maximum Handle Time appears for Agent1 on the **Agent Summary Report**. It does not appear for CSQ1 on the **Contact Service Queue Activity Report** because Agent1 was conferenced in to the call, but the call was initially handled by another CSQ.

Q. If a call is queued in CSQ1 and CSQ2, and handled by an agent-based routing agent, the CSQ Unified CCX Stats real-time report shows a value of 1 for Contacts Dequeued for both CSQ1 and CSQ2, but the **Contact Service Queue Activity Report** shows a value of 0 for Calls dequeued for both CSQ1 and CSQ2, why is this so?

A. In this scenario, there are three CQDRs:

1. CQDR for CSQ1—With a disposition of Handled_by_other (5) (or of 4 if there is a dequeue step).
2. CQDR for CSQ2—With a disposition of Handled_by_other (5) (or of 4 if there is a dequeue step).
3. CQDR for agent—Who handled call through agent-based routing, with a disposition of Handled (2).

The **Contact Service Queue Activity Report** shows dispositions 4 and 5 as Calls Handled by Other, so it shows one call as handled by other for both CSQ1 and CSQ2. Calls Dequeued is 0 for both the CSQs (disposition 3 is reported as dequeued on the report).

The CSQ Unified CCX Stats real-time report counts calls marked as Handled_by_other as dequeued calls. In this report, Contacts Dequeued includes calls that were dequeued and handled by another CSQ, by an agent, or by a script.

Q. Why are the Calls Dequeued field values different in the **Contact Service Queue Activity Report by Interval** or **Contact Service Queue Activity by CSQ Report** and the **Contact Service Queue Activity Report**?

A.

- In the **Contact Service Queue Activity Report by Interval** and **Contact Service Queue Activity by CSQ Report** :

  Calls Dequeued = Calls dequeued via the dequeue step + calls handled by workflow script + calls handled by another CSQ.

- In the **Contact Service Queue Activity Report**:
  - Calls Dequeued = Calls dequeued via dequeue step
  - Calls handled by other = calls handled by workflow script + calls handled by another CSQ

Q. Why does the Talk Time field in the **Agent Summary Report** show 0, but the Talk Time field in the **Agent Detail Report** shows another value?

A. The **Agent Summary Report** shows ACD calls only, but the **Agent Detail Report** shows Unified CCX and Cisco Unified IP IVR calls. The calls in question are IVR calls, so they do not appear on **Agent Summary Report**.

Q. What causes discrepancy between Historical reports and Cisco Agent Desktop reports?

A. If Agent1 performs a consult transfer to Agent2 for an incoming ACD call, a Historical report shows two call legs for both Agent1 and Agent2. The Cisco Agent Desktop reports show two call legs (one inbound and one outbound) for Agent1, but only one call leg for Agent2.

Q. If an agent uses a unique reason code when going to Not Ready state to make outbound calls, why does the **Agent Not Ready Reason Code Summary Report** show a different duration for that reason code compared with the **Agent Detail Report** that shows the duration of outbound calls for the agent?

A. If the agent does not spend the entire duration of time in Not Ready state with the unique reason code making outbound calls, then the sum of the duration of outbound calls will be less than the duration that is spent in Not Ready state with the unique reason code.

Abandoned Call Detail Activity Report

Q. How can I correlate multiple abandoned call legs that belong to the same call?

A. Match the call start time in the **Abandoned Call Detail Activity Report** with the call start time in the **Detailed Call by Call CCDR Report**, and look up the session ID and session sequence number in the **Detailed Call by Call CCDR Report**. Different call legs that belong to the same call have the same session ID, but different session sequence numbers.

Q. Why do the Initial Call Priority field or the Final Call Priority field show n/a for a call?

A. The call was abandoned before it was assigned a priority.

Q. What does it mean when the Agent Name field is blank?

A. The call was abandoned before it was routed to an agent.

Q. What does it mean when the Agent Name field contains a value?

A. The call was routed to an agent, the agent did not answer, and the caller hung up.

Q. Why is there a mismatch between the number of abandoned calls that are shown on the **Abandoned Call Detail Activity Report** and the number of calls that are shown on the **Contact Service Queue Activity Report**?

A. The values can differ because the **Contact Service Queue Activity Report** may mark a call as dequeued, while a Contact Call Detail record marks the call as abandoned. For example, consider the following workflow:

```
StartAccept
Prompt
Select Resource
-Connect
-Queue
--Play Prompt (Prompt2)
```

```
--Dequeue
--Play Prompt (Prompt3)
End
```

Scenario	Contact Service Queue Activity Report	Abandoned Call Detail Activity Report
Call is abandoned during Prompt2 or Prompt3	The Contact Queue Detail record marks the call as dequeued, but not as abandoned from any queue. So, the **Contact Service Queue Activity Report** shows the call as dequeued from all CSQs to which the call was routed.	The Contact Call Detail record marks the call as abandoned. So, the **Abandoned Call Detail Activity Report** shows the call as abandoned from all CSQs to which the call was routed.
Call gets aborted after being in the queue	Call is marked as aborted in the Contact Call Detail record. So, the CSQ reports display more abandoned calls than the **Abandoned Call Detail Activity Report**.	Call is marked as dequeued (if the call was dequeued before aborting) or abandoned in Contact Queue Detail record.

Q. When an agent transfers a call to another agent and the caller abandons the call, why is the call not displayed in the **Abandoned Call Detail Activity Report**?

A. When an agent transfers a call to another agent, and the caller abandons the call before the call is answered by the second agent, then the first phase of the call is marked as handled. The abandonment of the second phase is not displayed in the **Abandoned Detail Call Activity Report**. This information cannot be seen in any other report.

Agent Call Summary Report

Q. Are the ACD—Transfer In and ACD—Transfer Out calls included for calculating Inbound ACD—Total field?

A. Yes, these calls are included for calculating the Inbound ACD—Total field.

Q. Why is the total number of inbound calls different than the number of calls handled on the **Contact Service Queue Activity by CSQ**?

A. The number of calls can differ for the following reasons:

- The Agent Call Summary Report shows calls that are presented to the agents, and the **Contact Service Queue Activity by CSQ** shows calls that are presented to the CSQs. If there are agents included in the Agent Call Summary Report who do not belong to the CSQs in the **Contact Service Queue Activity by CSQ**, then the **Agent Call Summary Report** shows more calls.
- If agent-based routing is configured, calls can go to agents directly, without going through a CSQ. In this case, the **Agent Call Summary Report** shows more calls.

- The **Agent Call Summary Report** can include transferred ACD calls. For example, if a call is queued for CSQ1, handled by Agent1, and transferred by Agent1 to Agent2 (without going through a CSQ), then one call is shown as handled on the **Contact Service Queue Activity Report** (through CSQ1 by Agent1). The same is shown twice on the **Agent Call Summary Report—**one as handled by Agent1 (through CSQ1), another as handled by Agent2 (not through a CSQ but as a direct transfer from Agent2).

Agent Detail Report

Q. Why are the Hold Time and the Work Time fields blank for a call?

A. The call was not an ACD call. (IVR calls include Agent-to-Agent calls and external calls made by an agent.) The Unified CCX database does not record hold time and work time for IVR calls.

Q. Why is Duration not equal to Talk Time + Hold Time + Work Time?

A. The value in the duration field is calculated as follows:

call end time – call start time

The call start time is when the call rings at the agent extension. The call end time is when the agent leaves Work state. Therefore, the call duration is equal to ring time + talk time + hold time + work time.

Q. How can I identify IVR calls?

A. The Hold Time and the Work Time fields are blank in the **Agent Detail Report** for IVR calls.

Agent Login Logout Activity Report

Q. Why does a less-than sign (<) precede the value in the Login Time field or a greater-than sign (>) precede the value in the Logout Time field?

A. A less-than sign (<) indicates that the agent logged in before the report start time. A greater-than sign (>) indicates that the agent logged out after the report end time.

For example, if the report start time is 8:00 a.m. (0800) and the report end time is 6:00 p.m. (1800):

- The agent logged in at 7:45 a.m. (0745), the Login Time field will show < 8am (or < 0800).
- If the agent logged out at 6:30 p.m. (1830), the Logout Time field will show > 6pm (or > 1800).

Agent State Summary by Agent Report

Q. Why do I see two rows for the agent with the same values?

A. The report template defines the view of the report. There are two kinds of summary rows (darker background) that are defined in the template. The summary row that follows after each agent summarizes details of the agent. The summary row that appears at the end of the report summarizes details of all the agents.

If there is a single row for the agent, then the summary row of the agent will have the same details as the above row.

Agent Summary Report

Q. How is the Average Logged In Time field calculated?

A. This value is calculated as the total logged-in time divided by the number of login sessions.

For example, if an agent logs in at 8:00 a.m. (0800) and logs out at 8:30 a.m. (0830), logs in again at 9:15 a.m. (0915) and logs out at 10:00 a.m. (1000), then there are two login sessions. The first session lasts 30 minutes and the second session lasts 45 minutes. The average logged-in time is (30+45)/2 = 37.5 minutes.

Q. How is the Handle Time field calculated?

A. Handle time = Talk time + Hold time + Work time.

Q. How is the Idle Time—Avg field calculated?

A. This value is calculated as the total idle time divided by the number of idle sessions.

For example, if an agent goes to Not Ready state at 10:00 a.m. (1000) and goes to Ready state at 10:15 a.m. (1015), goes to Not Ready state at 11:00 a.m. (1100) and goes to Ready state at 11:05 a.m (1105), then there are two idle sessions. The first session lasts 15 minutes and the second session lasts 5 minutes. The average idle time is (15+5)/2 = 10 minutes.

Q. Why do not the values of Talk Time—Avg and Talk Time—Max fields in the **Agent Summary Report** match the values of Talk Time field in the **Agent State Summary by Agent Report** or the **Agent State Summary by Interval Report**?

A. The talk time information in the **Agent Summary Report** comes from the talkTime field in the AgentConnectionDetail table. This value is the time that an agent spent on an incoming ACD call. The talk time information in the **Agent State Summary by Agent Report** or the **Agent State Summary by Interval Report** comes from AgentStateDetail table. These values show the time that an agent spent in the Talk state. These values will be different if the agent placed ACD calls on hold during the reporting period.

Q. Does the **Agent Summary Report** show information for IVR calls?

A. The **Agent Summary Report** shows information for ACD calls only. The **Agent Detail Report** shows information for Unified CCX and Cisco Unified IP IVR calls.

Application Performance Analysis Report

Q. What does it mean when the Application ID field shows the value –1 and the Application Name field is empty?

A. The Application ID field is –1, and the Application Name field is empty for Agent-to-Agent calls, IVR calls, Agent-to-Agent transfer/conference consult legs, or any other call that is not placed to a Unified CCX Route Point or associated with an application.

Q. Why is the value in the Calls Presented field lower than the total number of calls on the **Detailed Call by Call CCDR Report** for the same report period?

A. The **Application Performance Analysis Report** counts only incoming calls. The **Detailed Call by Call CCDR Report** counts incoming calls, outgoing calls (for example, outbound calls made by agents), and internal calls (for example, Agent-to-Agent consult calls).

Q. Why does the **Application Performance Analysis Report** show more abandoned calls than the **Contact Service Queue Activity Report** for the same report period?

A. The **Contact Service Queue Activity Report** includes only abandoned ACD calls. This report counts an ACD call as abandoned if the caller hangs up while queued for a CSQ or CSQs.

The **Application Performance Analysis Report** includes abandoned ACD calls and abandoned IVR calls. This report counts a call as abandoned if the call ends before it is answered by an agent or before it is marked as handled by a workflow.

Call Custom Variables Report

Q. What are the values from Custom Variable 1 through Custom Variable 10 fields?

A. These fields show the values of the custom variables that are specified in a workflow.

For example, a workflow may designate variable1 as the menu option that the caller chooses, and designate variable2 as the account number that the caller enters. In this case, Custom Variable 1 would show the option value (such as 2) that the caller entered, and Custom Variable 2 would show the account number that was entered.

Common Skill CSQ Activity Report

Q. Common Skill CSQ Activity Report is similar to other CSQ reports—how is it useful?

A. This report provides additional information for multiple CSQs that are configured with the same call skill, but with different competence levels. An incoming call may be queued for the CSQ with the

lowest-competence level. If no agent is available for a certain period, the call is queued for the next higher-competence level.

The summary line in the report displays the summarized statistics for the group of CSQs configured with common skills. A group of CSQs that is configured in this manner is called a logical CSQ.

Contact Service Queue Activity Report

Q. How are average queue time and maximum queue time calculated?

A. The average queue time for a CSQ is calculated as the sum of the queue times for all the calls presented divided by the number of calls presented. The maximum queue time for a CSQ is the longest queue time for a single call among the calls presented.

The individual queue time for each CSQ is stored in the CQDR table. For example, assume that an incoming call is queued for CSQ1 for 5 minutes, queued for CSQ2 for 10 minutes, and then it is handled by CSQ1. The queue time recorded for CSQ1 in the CQDR table is 5 minutes, and for CSQ2 is 10 minutes.

Q. How are average calls abandoned (Avg Abandon Per Day field) and maximum calls abandoned (Max Abandon Per Day field) calculated?

A. Average calls abandoned for a CSQ is an average value per day. It is calculated as the total number of calls abandoned for the CSQ divided by the number of days in the report period.

Maximum calls abandoned for a CSQ is calculated by determining the number of calls abandoned for each day in the report period and selecting the largest of these values.

Q. The system receives a call, queues it, and plays a prompt giving the caller the option to press 1 to leave a message. The caller presses 1 and leaves a message. In this scenario, is the call counted as abandoned or as handled?

A. By default, the call is counted as abandoned instead of handled, because it did not connect to an agent. However, if the workflow is designed to mark a call as handled after a caller leaves a message, the call will be counted as handled.

Q. If a workflow gives callers the option to transfer to a voice messaging system, is there a way to track the number of callers that make this transfer and leave a message?

A. You can design a workflow to store a caller's key input in one of the custom variables in the ContactCallDetail table. You can either generate the **Call Custom Variables Report** and manually count the rows that contain the desired information or you can create a custom report to provide this information.

Q. Will calls presented always equal calls handled + calls abandoned?

A. No. Calls presented = calls handled + calls abandoned + calls dequeued + calls handled by others.

"Calls handled" are the calls that were connected to an agent in a particular CSQ. "Calls handled by others" are the calls that were handled by some workflow in a script, and the calls that were queued for multiple CSQs and then handled by one of the other CSQs.

Q. Can the **Contact Service Queue Activity Report** show hourly data? And can hourly reports be generated automatically for each hour of each day?

A. To show hourly data for each day, schedule daily reports either for **Contact Service Queue Activity by CSQ Report** or for **Contact Service Queue Activity Report by Interval**. Set the Interval Length to 60 minutes. This setting will provide one report each day, divided into one-hour intervals.

Separate hourly reports are not available, but with the interval length set to 60 minutes, a daily report will display 24 intervals, one for each hour of the day.

Contact Service Queue Activity by CSQ Report

Q. Why does the same CSQ appear twice in the **Contact Service Queue Activity by CSQ Report** (and other CSQ reports)?

A. A CSQ has many attributes, including CSQ name, service level, resource selection criterion, and auto work. Some attributes, such as CSQ name and service level, are displayed in the report. Other attributes are not displayed in the report. However, changing any attribute of the CSQ causes a new line to show in the report. For example:

- If the service level is changed from 10 to 25, two lines of the same CSQ will show in the report. One line will show the old service level value and another line will show the new service level value.
- If Auto Work is changed from 1 to 0, two lines of the same CSQ will be shown in the report. As the Auto Work setting does not appear in the report, the same CSQ will appear twice.

Q. How do these four fields differ—Percentage of Service Level Met—Only Handled, Percentage of Service Level Met—With No Abandoned Calls, Percentage of Service Level Met—With Abandoned Calls Counted Positively, and Percentage of Service Level Met—With Abandoned Calls Counted Negatively?

A. A call is categorized as handled if it is either answered by an agent or marked as handled by a workflow. Handled calls can be divided into the following categories:

- Handled within service level
- Handled after service level

A call is categorized as abandoned if the call disconnects before an agent answers. Abandoned calls can be divided into the following categories:

- Abandoned within service level
- Abandoned after service level

Field	Description	Calculation
Percentage of Service Level Met—Only Handled	This field shows only handled calls. It does not include abandoned calls. This field shows the percentage of handled calls that were handled within the service level. The remaining fields differ in how they account for abandoned calls: not counted, meeting service level, or not meeting service level.	(Number of calls handled within service level / Number of calls handled) * 100%
Percentage of Service Level Met—With No Abandoned Calls	This field shows the percentage of presented calls (calls routed to a CSQ), not counting abandoned calls, that were handled within the service level. It does not include calls that were abandoned within the service level. This value is always less than or equal to the value in the Percentage of Service Level Met—Only Handled field	(Number of calls handled within service level / (Number of calls presented – Number of calls abandoned within service level)) * 100%
Percentage of Service Level Met—With Abandoned Calls Counted Positively	The field shows the calls that are abandoned within the service level as meeting the service level. It shows the percentage of presented calls that were handled or abandoned within the service level.	((Number of calls handled within service level + Number of calls abandoned within service level) / Number of calls presented) * 100%
Percentage of Service Level Met—With Abandoned Calls Counted Negatively	The field shows the calls that are abandoned within the service level as not meeting the service level. It shows the percentage of presented calls that were handled within the service level. This value is less than or equal to the Percentage of Service Level Met—With Abandoned Calls Counted Positively field.	(Number of calls handled within service level / Number of calls presented) * 100%

Q. How is an abandoned call counted if it is queued for multiple CSQs?

A. If a call is queued for multiple CSQs and is abandoned, it is counted as abandoned from all the CSQs for which it is queued.

For example, if a call is queued for CSQ1 and CSQ2 and the caller hangs up before being routed to an agent, then an abandoned call is counted for CSQ1 and for CSQ2.

Q. How is a dequeued call counted if it is queued for multiple CSQs?

A. If a call is queued for multiple CSQs and is handled by one of them, then the call is counted as dequeued from each of the other CSQs.

For example, if an incoming call is queued for CSQ1, CSQ2, and CSQ3 and is handled by an agent from CSQ2, then a dequeued call is counted for CSQ1 and for CSQ3.

Q. After the service level for a CSQ changes, why does the CSQ appear in the report twice—once with the old service level and again with the new service level?

A. The Unified CCX database maintains records of old and new service levels. When a new service level is configured, the old record is marked as inactive. The dateInactive field in the ContactServiceQueue table shows the date and time that the new service level was configured. If the value in the dateInactive field is in the report period, the report shows the active (new) and inactive (old) CSQs.

Detailed Call by Call CCDR Report

Q. What are a session ID and a session sequence number?

A. A session ID is a unique identification number that the system assigns to a call. This number remains the same for the entire call. The system also assigns a sequence number to each leg of a call. Sequence numbers start at 0 and increment by 1 each time the call is transferred or redirected.

Q. Can a call be marked as handled if it is never queued for a CSQ?

A. Yes. You can design a workflow to mark such a call as handled.

Q. Why are the Hold Time and the Work Time fields blank?

A. The call was an IVR call. (IVR calls include Agent-to-Agent calls and external calls that are made by an agent.) The Unified CCX database does not record hold time and work time for IVR calls.

Q. Why does the report show duplicate calls?

A. The calls in the CCDR Report are not duplicates. They are conference calls, which have the same SessionID and Session Sequence Number, but different talk time because different agents participated in the same call. (The **Detailed Call by Call CCDR Report** shows the names of agents who participated in a conference call.)

Q. What does it mean when the Contact—Disposition is 3?

A. When the system removes stuck calls, which may have remained in the system because of missing events, the system writes a CCDR with the contact disposition dont_care (value = 3).

License Utilization Hourly Report

Q. What is the sampling frequency for the report?

A. Data is sampled per minute. The report aggregates the data over an hour (maximum of all samples within the hour).

Q. How are calls that are less than a minute treated?

A. If a call duration is less than a minute and its start and end times fall between two sampling points, then this call will not be considered for the statistics.

Traffic Analysis Report

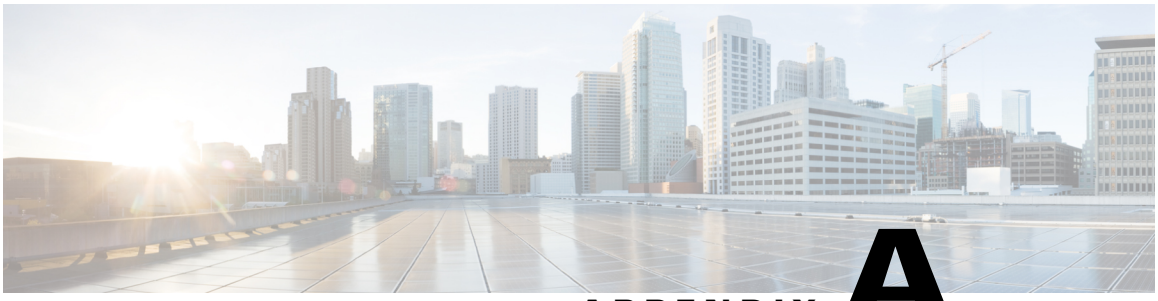
Q. Why is there a difference between the Total Incoming Calls field in the **Traffic Analysis Report** and the Total Incoming Calls field in the **Application Performance Analysis Report**?

A. An incoming call can have multiple call legs. The **Traffic Analysis Report** counts a call with multiple legs as a single call. However, each call leg may invoke a different application, so the **Application Performance Analysis Report** counts each call leg as a call.

For example, if a call comes into an Auto Attendant and the caller selects a menu option for Musician Demonstration, then the call will have two call legs:

- Session ID = 1, sequence number = 0, application = “auto attendant”
- Session ID = 1, sequence number = 1, application = “musician demonstration”

This call is counted once for the **Traffic Analysis Report**. It is counted twice for the **Application Performance Analysis Report—**once for the “auto attendant” application and once for the “musician demonstration” application.



APPENDIX A

Glossary

A

Abandoned call

- For an agent-based call (Unified CCX call), a call is considered abandoned if it is not answered by an agent or the caller hangs up or the call is disconnected.
- For Unified IP IVR call, a call is considered abandoned if it does not reach the workflow step that sets the Handled flag.
- If a call has more than one leg that is abandoned, for example, a Unified IP IVR call that is processed by different applications, each abandoned leg is counted as an abandoned call.

Abandoned chat

An abandoned chat is a chat that is routed to the CSQ but not accepted by an agent, because the chat submitter ended the chat before an agent accepted.

Abandoned IVR call

The system abandons a call when a customer answers the phone if an IVR port is not available to play the prompts to the customer. So, Unified CCX fails to transfer the call to the IVR port.

Aborted call

A call is aborted if an exception occurs in the workflow that is processing a call, for example, UndefinedPromptException or ApplicationMaxSessionsException. In such cases, Unified CCX sets up media and plays the error message to the caller.

Accepted outbound call

A call is considered accepted if the agent clicks Accept when presented with the call. A call that is routed to an agent, skipped or rejected by that agent, routed to another agent, and then accepted by that agent is counted once.

ACD or ICD call

Automatic Call Distribution (ACD) or Incoming Call Distribution (ICD) calls are calls that are processed through a workflow and queued to the agent. Calls are dialed to an ICD route point number.

Agent-initiated reason codes

Agent enters reason codes when moving to Logout or Not Ready state. For more information, see the *Cisco Agent Desktop User Guide* and the *Cisco Desktop Administrator User Guide* available here: http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_user_guide_list.html

Attempted IVR contact

A contact is considered attempted if the contact is dialed out by the IVR dialer. If the same contact is retried, the attempt does not fall under the Attempted category. Even though a contact is retried multiple times, the attempted contact is counted only once.

Attempted outbound call

- A contact is considered attempted when an outbound call is placed to the customer, regardless of the outcome. A call record is considered attempted if an agent clicks Accept for this contact.
- A contact that is routed to and accepted by an agent is considered attempted by the system. If the contact is marked for callback and later called by the same or another agent, this call record is still attempted once.

C

Closed outbound call

A call is considered closed if the agent clicks either Skip-Close or Reject-Close. These contacts are not dialed again.

D

Dequeued call

A call is dequeued from a particular CSQ for the following reasons:

- The call is dequeued by a Dequeue step in a workflow.
- The call is marked as handled by a workflow.
- The call is queued for more than one CSQ and is handled by an agent in another CSQ.

F

Failed IVR call

- Dialer asks the gateway to cancel a call that is not yet placed.
- Gateway declined the call.
- Gateway is down or Gateway timed out while the call is being placed.
- Gateway failure or configuration issues at the Gateway.

H

Handled call

A call is considered handled:

- When the call state is one of these—Voice, Answering Machine, Invalid Number, or Fax/Modem.
- Call reaches the workflow step that defines the call as handled.
- Call is handled by an agent.

Handled chat

A chat is considered handled if an agent accepts the chat that is presented by the chat submitter while the chat submitter is queued for this CSQ.

I

IP Phone Agent (IPPA)

IP Phone Agent is an agent who has access to only a phone and not Cisco Agent Desktop.

N

Non-ACD or non-ICD call

A call that is not dialed to an ICD route point number. For example, an internal call between agents or an outbound call.

Non-Unified CCX call

A call that is dialed to the agent's non-Unified CCX extension.

O

Offered call

Outbound calls that are offered to the agent, including accepted, rejected, and closed calls.

A contact that is offered to an agent multiple times, possibly because the agent skipped the call and the call is looped back to the same agent, is counted once for each time the contact is presented.

P

Presented call

Calls sent to the agent irrespective of whether the agent answers the call. If a call is connected to an agent, transferred to another agent, and then transferred back to the original agent, the value for the original agent increases by two (once for each time the call was presented)

R

Rejected call

A call is considered as rejected when Unified Communications Manager or Unified CCX resources are not sufficient for accepting incoming calls as system resources reach their maximum capacity, for example, insufficient number of CTI ports.

Rejected outbound call

A call is considered rejected if the agent clicks either Reject or Skip or Cancel Reservation. These contacts are dialed again. If a contact is rejected by multiple agents, then the field is incremented each time the contact is rejected.

S

Service Level Agreement (SLA)

The percentage of calls answered within the amount of time that is specified in the service level threshold for a CSQ.

Successful outbound call

The agent accepts the call, and selects a classification of Voice for this contact. The calls that are marked with this classification are a subset of accepted calls.

System-generated reason codes

Built-in reason codes are generated when the Unified CCX server moves an agent to Logout state or Not Ready state. The Agent State Detail table includes a valid reason code for these two states. Reason code for other states is zero.

T

Talk time

Talk time is the elapsed time between the time that an agent connects to a call and the time the call is disconnected or transferred, not including hold time.

U

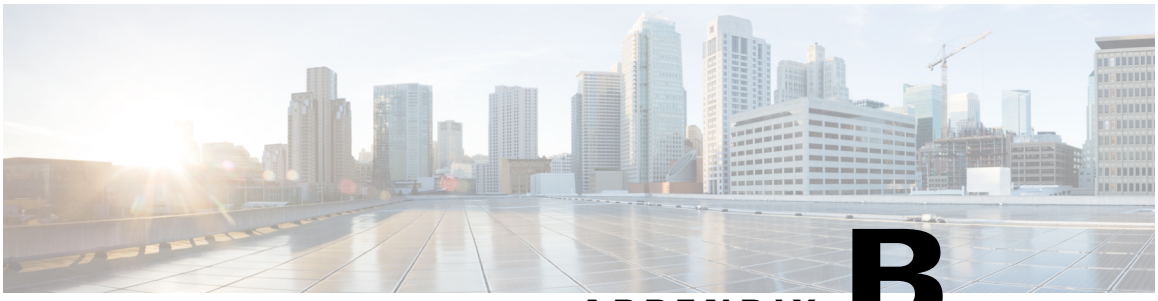
Unified CCX call

A call that is dialed to the agent's Unified CCX extension.

W

Wait time

Wait time is the time that elapsed between the time a call entered the queue and the time the call was answered by an agent or was disconnected.



APPENDIX B

Data Reconciliation between Reports

This appendix explains the differences between reports in Unified CCX. These differences are not limitations of the product but are inherent in the way these reports are designed and are intended to work.

Calls Reported

Each report type includes different types of calls in its calculations. The following table lists the report types and the calls that they include:

Report Type	Report Name	Reported Call Types			
		ACD Calls	ACD + Non-ACD Calls	Inbound	Outbound[1]
Historical reports	Contact Service Queue Activity Report	Y	N	Y	N
	CSQ Agent Summary Report	Y	N	Y	N
	Agent Detail Report	N	Y	Y	Y
	Agent Call Summary Report	N	Y	Y	Y
	Agent Summary Report	Y	N	Y	N
	Detailed Call by Call CCDR Report	N	Y	Y	Y
	Detailed Call CSQ Agent Report	N	Y	Y	Y

1 Does not include outbound preview calls.

Consult Transfer

Consult transfer is reported in different ways in different reports. Consider the following call flow.

Call Flow Example

A caller calls into a Call Center Route Point, which queues the call in CSQ and routes it to agent1. Agent1 talks to the caller, initiates a consult transfer to agent2, talks to agent2, and completes the transfer. Agent2 talks to the caller and then drops the call.

This scenario will be reported as follows:

Report	Data Presented
Detailed Call by Call CCDR Report (System perspective)	**1** One call record with type = 1 (incoming) for the call between the caller and agent1. **2** One call record with type = 3 (internal) for the consult call between the two agents. **3** One call record with type = 5 (transferred-in) for the call between the caller and agent2.
Agent Detail Report (Agent perspective)	**1** For agent1: **1** One call record for call with the caller (Inbound + transfer-out) to indicate that this call was transferred out to another agent. **2** One call record for the consult call with agent2 (outbound). **2** For agent2: **1** One call record for the consult call with agent1 (Inbound Non-ACD). Consult calls are always Non-ACD in Historical reports. **2** One call record for the call with the caller (Inbound + transfer-in) to indicate that a transferred call was received.